# 1990 IUCN Red List of Threatened Animals

Compiled by the World Conservation Monitoring Centre





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#### IUCN - THE WORLD CONSERVATION UNION

Founded in 1948, IUCN – the World Conservation Union – is a membership organisation comprising governments, non-governmental organisations (NGOs), research institutions, and conservation agencies in 120 countries. The Union's objective is to promote and encourage the protection and sustainable utilisation of living resources.

Several thousand scientists and experts from all continents form part of a network supporting the work of its six Commissions: threatened species, protected areas, ecology, sustainable development, environmental law and environmental education and training. Its thematic programmes include tropical forests, wetlands, marine ecosystems, plants, the Sahel, Antarctica, population and sustainable development, and women in conservation. These activities enable IUCN and its members to develop sound policies and programmes for the conservation of biological diversity and sustainable development of natural resources.

#### WCMC - THE WORLD CONSERVATION MONITORING CENTRE

The World Conservation Monitoring Centre (WCMC) is a joint venture between the three partners in the World Conservation Strategy, the World Conservation Union (IUCN), the World Wide Fund for Nature (WWF) and the United Nations Environment Programme (UNEP). Its mission is to support conservation and sustainable development by collecting and analysing global conservation data so that decisions affecting biological resources are based on the best available information.

WCMC has developed a global overview database of the world's biological diversity that includes threatened plant and animal species, habitats of conservation concern, critical sites, protected areas of the world, and the utilisation and trade in wildlife species and products. Drawing on this database, WCMC provides an information service to the conservation and development communities, governments and United Nations agencies, scientific institutions, the business and commercial sector, and the media. WCMC produces a wide variety of specialist outputs and reports based on analyses of its data.

### 1990 IUCN Red List of Threatened Animals

Prepared by the

### World Conservation Monitoring Centre Cambridge, U.K.

In association with the
IUCN Species Survival Commission
and the
International Council for Bird Preservation

Guest Essay by

Dr Nathan Flesness and Dr Tom Foose

of the

IUCN/SSC Captive Breeding Specialist Group

IUCN, Gland, Switzerland, and Cambridge, U.K. Published by:

> Prepared with financial support from the World Conservation Monitoring Centre, and published with a grant from the IUCN

Species Survival Commission.

A contribution to GEMS - the Global Environment Monitoring System.





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Citation:

IUCN (1990). 1990 IUCN Red List of Threatened Animals. IUCN,

Gland, Switzerland and Cambridge, U.K. 228 pp.

ISBN:

2-8317-0031-0

Printed by:

Page Bros (Norwich) Ltd., U.K.

Cover photo:

Partula snail by Simon Tonge of the Jersey Wildlife Preservation

Trust.

Cover design by: IUCN Publications Services Unit

Compiled by:

Jane Thornback, Crawford Allan, and Patricia Almada-Villela, with assistance from Rosina Abudulai, Brian Groombridge, Tim Inskipp, Allan Mackenzie, Duncan Mackinder, Nick Phillips,

and Martin Sneary.

Available from:

**IUCN Publications Services Unit** 

219c Huntingdon Road, Cambridge CB3 ODL, U.K.

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#### **FOREWORD**

The Red List of species threatened with extinction is an international bulletin board alerting people to particulars of the diminishment of biodiversity worldwide. It is a very incomplete list, for, as Bruce Wilcox indicated in the last edition of the Red List, there are likely millions of inconspicuous species that are unclassified and that likely will be extinct before we know them scientifically. Nevertheless, the Red List and the Red Data Books of IUCN – the World Conservation Union, have served to stimulate many countries to assess the conservation status of their floras and faunas more extensively and completely. In response, laws and regulations to protect and conserve endangered species have been instituted nationally and internationally. There have also resulted more programmes to rescue endangered species under the protection of national parks, reserves, zoological parks, aquariums, and botanical gardens. And more habitat restoration and species reintroductions are now underway.

Yet catastrophic extinction waves are still before us if current practices and growth of human populations continue. The advent of a world convention or treaty on the conservation of biological diversity under the aegis of IUCN and the United Nations Environment Program is therefore a timely and much needed development to help stem the extinction tide. The member governments and organizations of IUCN should attend as rapidly and closely as possible to this opportunity to promote more effective conservation of living natural resources globally.

The principal users of this slim volume are no doubt already concerned or involved in aspects of species and habitat conservation. Yet all may not be aware of the complementary work of the IUCN to galvanize conservation efforts on behalf of Red List and other species. The reference here is to the Action Plan programme of IUCN's Species Survival Commission, which is a comprehensive scheme to specify the conservation status, priorities, and actions needed for many groups of plants and animals. Fifteen such plans by SSC Specialist Groups have been published, and several more are in preparation. Also in publication is a regional action plan for Sub-Saharan Africa compiled by Simon Stuart.

It is our hope that implementation of the SSC Action Plans can and will be followed by governments and non-governmental organizations, aided and assisted where possible by the SSC volunteer network of experts. Great encouragement of the overall Action Plan programme has been received this year through the Peter Scott Memorial Appeal. A generous gift from the Government of Oman will foster continuing preparation of the plans and first steps in implementation of those that have been completed. It is, of course, very fitting that Sir Peter Scott be remembered in this way, for he was the founder of the Species Survival Commission, the Red Data Books, and the Action Plan idea. There is a clear challenge to us to be as thoughtful and creative in continuing the work that he started.

In carrying on, the SSC has undertaken to re-examine the traditional categories used in classifying the conservation status of species. There is consequently now a study by Georgina Mace and Russell Lande examining extinction danger from the standpoint of population biology. There will be other studies relating to this question, including an attempt to rate extinction risks from causative human

acitivities. In this way, future Red Lists may become increasingly precise and compelling as they succinctly signal the condition of the world's heritage of species. Meanwhile, we must take up the cause of whole groups of species whose existence is suddenly imperilled – amphibians and sharks are immediate examples, with very different causational factors implicated.

Another approach to priorities in the conservation of biodiversity is identifying places rich in species and concentrating action on preservation and protection of these areas, labelled "hot spots" by Norman Myers. Recently, Russell Mittermeier has extended this idea to the political geography of the world and identified megadiversity countries that deserve focussed conservation attention. A suggested Green List of species important ecologically, evolutionarily, or economically may be another worthwhile venture. Such initiatives as well as the Red List are all valuable in reinforcing the message that people and their governments must act now if we are to conserve the world's natural heritage.

In closing, it is appropriate to acknowledge the extraordinary effort made by Jane Thornback in compiling this and previous Red Lists. It is also fitting to note that such labour and the expenses of producing the Red List, the Red Data Books, the SSC Action Plans, and related publications will be in vain unless conservationists of all kinds work to see that there are indeed adequate responses to the warnings of irrevocable losses of species that these publications provide. May this book's readers so commit themselves for the benefit of future generations.

George B. Rabb Chairman, Species Survival Commission IUCN, The World Conservation Union

#### INTRODUCTION

The IUCN Red List of Threatened Animals is a list of those taxa known by IUCN to be threatened with extinction. It complements the IUCN Red Data Books and the IUCN Species Action Plans, both of which contain more detailed information on the conservation status of species.

IUCN'S threatened animal list is compiled and maintained for IUCN by the World Conservation Monitoring Centre (WCMC) with the assistance of the International Council for Bird Preservation (ICBP). The list is published periodically. For each threatened taxon, the list includes its scientific name, english common name, IUCN threat category and a brief description of its distribution.

The threatened species list is based on information provided by numerous scientists and naturalists working in the field. The information may arrive at IUCN in the form of published and unpublished reports, books and correspondence. Much of the information is collated together by the Species Specialist Groups of IUCN's Species Survival Commission (SSC) and the Working Groups of the ICBP.

The threat category assigned to a species is determined by a review of the factors impinging on a species and the extent of the effect that these are having. Key factors that are examined include the change in distribution, change in numbers, degree and type of threat, population biology of the species and the level of conservation committment and resources that the species is likely to benefit from. Currently, IUCN is reviewing new methods of assigning species threat categories.

The number of threatened taxa identified by IUCN is just over 5000, comprised of 698 mammals, 1047 birds, 191 reptiles, 63 amphibians, 762 fishes and 2250 invertebrates. Except for birds, for which ICBP have now attempted a global review, these numbers represent only those taxa known by IUCN to be threatened. Many, many more taxa are threatened, many of them as yet undescribed by science. The number of taxa listed in the Red List is therefore only a fraction of the numbers it might be. Biodiversity in all its forms is being lost at a rate far exceeding that of any earlier extinction phase. Added to the major threats of habitat loss and overexploitation must now be added the impending threat of climate change. This will have a far reaching effect on conservation of biodiversity since the role of national parks and protected areas will be undermined especially with regard to plant and invertebrate conservation.

The IUCN threatened species list is constantly under review, with changes arising as new studies are undertaken or as previously unreviewed groups are examined by conservationists. Any relevant information on the status of species should be sent to IUCN or WCMC:

Red List Inventory World Conservation Monitoring Centre 219c Huntingdon Road, Cambridge CB3 0DL United Kingdom

Fax: 0223 277136

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#### **GUEST ESSAY**

#### THE ROLE OF CAPTIVE BREEDING IN THE CONSERVATION OF SPECIES

#### Nathan R. Flesness and Tom J. Foose

We have borrowed the Earth from our children, and are defaulting on the loan. Their planet will have less ability to sustain life, and less ability to sustain wonder.

There is understandable disagreement as to just exactly how many million fewer species there will be. Whatever the total, whatever terms used to measure it, we are witnessing a very rare event — a large scale reduction in the life forms on Earth. Such a loss of *kinds* of life seems to have happened only a few times in the last billion years, perhaps associated with the rare and catastrophic collision of Earth and a large meteor. Now, of course, we are seeing the catastrophic collision of Earth with an unprecedentedly large and powerful human population.

With such grand and terrible events going on, with a scale in the millions, what is the possible role of captive breeding programs for one or two thousand species?

One answer comes from the non-random pattern of the extinctions we are seeing. Though we are losing many uniquely adapted mice species, "mice" as a broad guild of creature, will certainly survive the next century or two. So will fox and coyote, thanks in part to the mice. But the larger carnivores—the grizzly, the tiger, the lion, the condor, the crocodile and crane, need larger and wilder space. Most such species are or will be at risk. The large herbivores—the rhino, elephants, desert antelopes, etc. not only need large areas of habitat but are commonly eliminated by human activity even before their habitat is. High cash value wild plants, such as orchids or exotic tropical hardwood trees are disappearing because of excessive harvest, not herbivores. Life forms that are large, slow-reproducing, insular, specialized for climax ecosystems, or have high cash value of harvest, are much less likely to be a part of the future ecology of the planet.

Sadly, we will lose more species of mice in the future, but not all mice. The same is true a thousand-fold for beetles. But we may lose all the rhino, and many or most of the broad group of wild mammals over 25kg or so. Similar perspectives but with different thresholds apply to birds, herps, fish, invertebrates, and plants. Humans naturally have often interacted deeply with life-forms that are very visible (birds, for example) or are within an order of magnitude of our own size. Loss of any species is a tragedy, but the larger forms—the elephant, buffalo, wolf, crane, and so on, have played particularly important roles in human ecology and culture. Many such species are, have been, and could again become important economically when we finally and inevitably make the transition to a sustainable society. Moreover, many such organisms have a special role in the heritage of peoples, or are of special religious importance. Or, in extremis, as phrased by Bill Conway, "Are not some creatures so marvellous and so important to our concept of Earth that they should be preserved when all traces of their evolutionary homes are gone?".

Tabulations by the World Conservation Monitoring Centre indicate that 3.7% of the land area of the Earth is now protected. Most of the rest is or will be developed or managed for human purposes so intensively that biological diversity will be greatly reduced. Some of the 3.7% is protected only on paper, some of it is under visitor parking lots. Because our species reserves 96% of the land surface for our own direct utilization, we had best learn or relearn ways to retain diversity in these unprotected areas as well.

The emerging science of Conservation Biology has provided a crude tool — Population Viability Analysis — to help evaluate persistence probabilities of populations over time, and to help rank and quantify both the various risks to survival, and the impacts of potential protective measures. When this PVA tool is applied to problem species, the answer most often produced is that not enough "wild" is left, that the species of interest is at risk from a combination of deterministic and stochastic factors, and at greater risk than our intuition expected. Setting aside 3.7% of the earth to protect life in general will not suffice, especially for large and top-of-the-food-chain creatures. We *must* protect more habitat, but often there is none left to protect outside of existing reserves.

Most habitat protection has necessarily been opportunistic. Many protected areas are now being found inadequate for the longer term. Often the "flagship" taxon, in whose name the area was initially protected does not have a reasonable chance of surviving in the area over time spans of the next century or two.

So why captive breeding? Aldo Leopold answered this with a striking aphorism—"the first rule of intelligent tinkering is to save all the pieces". Human activity, or tinkering, scores dismally on this intelligence test. The sum total of all our conservation activities (enormously smaller than our development activities) is failing to save anywhere near *all* of the pieces. The stakes have come down to saving *some* of the pieces.

Captive breeding can buy time. Time to correct a management error, time to stop human over-exploitation, time even to practice restoration ecology and restore some habitats — for which you need the pieces (species). Surely, re-introduction science and restoration ecology will themselves continue to make progress. In the most desperate cases, captive breeding can preserve valuable and fascinating living monuments to a wild that once was — time for our descendants to at least marvel at life, not just stuffed and ageing skins. In better cases, captive breeding may help buy time by augmenting an ongoing "wild" population which is too small to have a good chance of persistence without supplementary reservoir of both individuals and genes. In other cases, extinction of wild populations will someday be followed by complete re-introduction from captive-bred and sustained populations. Such programs have been accomplished in the past and have an even better chance in the future now that serious science and science-based patience are applied.

Some of course disagree, arguing instead that species cannot or should not be maintained *ex situ*. Such views would deny preservation and conservation options to all future generations. It is hard not to see this as profoundly arrogant.

The world's two bison species are historical examples of the role which captive breeding can play. The American bison (Bison bison) were reduced by Caucasian settlement from an estimated initial 60,000,000 to less than 1,000 by 1889. The

magnificent animals that today roam several protected areas in the American West were re-established beginning in 1907 with stock intentionally bred for this purpose at the Bronx Zoo (a wild remnant population estimated at 200 did survive in the then-new Yellowstone National Park). The equally magnificent European bison, or wisent (Bison bonasus) was completely exterminated in the wild in 1921, but was bred in zoos starting from 12 animals in 1913. Zoo bred stock was successfully re-introduced in 1956 into the remaining wild—the Bialoweiza Park—on the border of Poland and the U.S.S.R, where these animals thrive today.

Another important historical example is the Mongolian wild horse (*Equus przewalski*). A zoo population was established 1898-1900, with one additional wild-caught animal added in 1947. The species subsequently became extinct in the wild. Plans for re-introduction from zoo stock are now developing in Mongolia, China, and the U.S.S.R. What remains of this species has been sustained in captivity for as many as 14 generations.

In more recent years, two major improvements have occurred in the application of captive breeding to species preservation and conservation problems. One advance is the development and application of serious science to the re-introduction process. Though early efforts were occasionally successful, as mentioned above, most re-introductions were very casual in methodology and very mediocre in results. Modern approaches are exemplified by the Arabian oryx (Oryx leucoryx) which was hunted to extinction in the early 1970s but rescued by zoo-based captive breeding, then very successfully and scientifically re-introduced into Oman with the sponsorship of the Omani royal family under the leadership of Mark Stanley-Price. This species has since been re-introduced into another part of its original range, in Jordan. These experiences have led to an active IUCN/SSC/Re-introduction Specialist Group. Similarly serious scientific approaches are being taken in planning re-introductions of both the California condor (Gymnogyps californianus) and the Black-footed ferret (Mustela nigripes). Both of these are now extinct in the wild. After controversy delayed capture of the last several wild individuals of each, both are now successfully breeding in captivity. The high fecundity ferrets should be back in the wild less than a decade after their extinction. Captive breeding is being applied in numerous other cases as one tool to help in re-establishing species in areas from which they have been extirpated.

The second major advance is the development of cooperative national, regional, and international conservation management plans for zoo populations of important taxa. From early beginnings in the Anthropoid Ape Advisory Panel and Joint Management of Species Group in the United Kingdom and the development of the Species Survival Plans (SSP) by the American Association of Zoological Parks and Aquariums a decade ago, these cooperative captive conservation programs have expanded to include the Europaiesches Erhaltungszucht Program (EEP) program in zoos in Europe, Species Management Program (SMP) in Australasian zoos, developing programs in the Japanese Association of Zoological Gardens and Aquaria, and elsewhere. Over 150 taxa of all classes of vertebrates as well as the invertebrate genus Partula (endemic land snails of Moorea, now extinct in the wild) are now managed cooperatively by groups which total about 400 institutions (about half of the world's recognized zoos and aquariums). These programs use detailed population datasets (both individually-compiled studbooks and the International

Species Information System (ISIS) zoo database network) and contemporary population-and-conservation-biology analysis to support explicit conservation goals. Prime goals are retention of genetic diversity and maintenance of demographic stability (at the right time, generation of surplus for re-introduction). New programs, and coordination and linkage of existing national and regional programs, are being developed through the very active IUCN/SSC/Captive Breeding Specialist Group.

IUCN has already recognized the logic and contributions of captive breeding in the published IUCN Policy Statement on Captive Breeding, 4 Sept. 1987. This document makes the important point that captive breeding programs should be initiated when the wild population is still in the thousands. All too typically, as in the ferret and condor cases, captive options have been resisted until the wild population is less than 20(!), genetic erosion has already begun, the population is at maximum risk and there is no room or time for error, or for learning captive husbandry requirements.

Captive breeding is likely to buy time mostly for megafauna and attractive flora, as there are pre-existing institutions (and publics) interested in them and increasingly dependent on their propagation. Zoological gardens worldwide plan to expand from the 150 species now involved in multi-institution coordinated breeding programs, to perhaps 1,000 species. Botanical gardens are developing programs which may match or exceed this number.

Beyond the fact that the megafauna as a whole is uniquely threatened, captive propagation itself has disproportionate impact. The reasons are multiple:

- The public cares, and cares most about what it can see close to home. This care can be mobilized over time to change laws to better protect habitats and their occupants, protect more areas, even start habitat-restoration projects. Zoological and botanical exhibits of living creatures contribute substantially to nurturing emotional bonds between wild species and urban humans. Captive breeding of species at risk draws further powerful attention people see the threatened "flagship" creature or plant in television or printed news media and can often go see it in person (or live on videocamera) at the nearby breeding zoo or garden. We are in the early stages of learning to harness this resource, but such attention has already been used to change detrimental laws (Bison, Black footed ferret), acquire and protect new habitat areas (Red wolf, innumerable Nature Conservancy areas) and even start ecosystem restoration projects (Round Island, Mauritius, St Helena).
- The megafauna has large ecological impact. Even though other taxa may have higher total body mass per hectare, megafaunal species often have major effects on succession and patchiness of habitats. If we don't save these pieces for future restored ecosystems, we may have to build robots to emulate their "keystone" roles.
- The megafauna requires the most room. Mobilizing public interest in them generates pressure for adequate wild habitat areas large enough to operate as at least partially functional ecosystems and large enough to protect innumerable other taxa which can quietly thrive under their megafaunal "umbrella".

It is imperative that zoological and botanical institutions and other specialized facilities continue to increase their focus on threatened taxa. Broad scale review of taxa in need of captive propagation, institutional holdings and capacity, and demonstrated captive-breeding competence, is now being carried out as an integral part of the development of IUCN/SSC Action Plans. The collective zoological capacity is about 560,000 live specimens (International Zoo Yearbook, Vol. 26). Considerable collective competence with thousands of species is in hand. For example, ISIS data indicate that 92% of new zoo mammals are bred in captivity. Captive propagation facilities are developing, and must sustain, genetically and demographically sound captive-bred populations of hundreds, perhaps thousands, of wisely selected taxa. This role is well beyond that imagined when most of these institutions were established, and is beyond that even understood today by many of their funding sources. Nevertheless these programs are making increasingly real contributions to preserving some of the Earth's living heritage.

There will not be a single solution to the biodiversity crisis — it is simply too overwhelming. With luck there will be lots of little answers, each tapping different resources not available to the others, each contributing different pieces to a patchwork solution. This 1990 IUCN Red List identifies species known to be of special concern. Surely we want the readers of the 2000 IUCN Red List and the 2100 IUCN Red List, to find very few additional species marked Ex-extinct. In increasingly many cases, captive breeding is the only way we can keep this from happening.

Nathan Flesness and Tom Foose IUCN/SSC Captive Breeding Specialist Group 12101 Johnny Cake Ridge Road, Apple Valley Minnesota 55124-8199, USA

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#### INVENTORY REPORT FORM

Report to be mailed to Species Inventory Project, The World Conservation Monitoring Centre, 219(c) Huntingdon Road, Cambridge, CB3 ODL, U.K.

- 1. Country
- 2. Date
- 3. Reporter

Name: Address:

4. Taxon

Scientific Name: Common Name:

5. Distribution

Present: Former:

If possible, please include a map. Is present range preferred or enforced habitat?

#### 6. Population

Estimated numbers in the wild. Indicate date of estimate and describe method of estimation. Are numbers increasing, decreasing or stable?

#### 7. Habitat and Ecology

Biome type. Elevation range. Brief notes about social structure, feeding habits and diet, reproduction (gestation, breeding season, number of young, age of sexual maturation), longevity etc.

#### 8. Scientific interest and potential value

Use in scientific or medical research; commercial value in trade or local economy.

#### 9. Threats

E.g. habitat destruction, over-exploitation, hybridization, natural disasters, competition for food, introductions.

#### 10. Conservation Measures Taken

Legal measures (international conventions, national laws); is law enforced? Protected areas – does it occur in national parks, reserves etc.? If so, please list. Management programmes or research programmes in progress.

#### 11. Conservation Measures Proposed

Same as for 10, but measures that are needed for the conservation of the taxon.

#### 12. Captive Breeding

Numbers in captivity – use ISIS or International Zoo Yearbook. Does it breed readily in captivity?

#### 13. Remarks

Reference citations for description of animal. Comments about related taxa. If the above information concerns a subspecies then brief information should be given about the distribution and status of the species as a whole. Special acknowledgements *etc*.

#### 14. References

Can be published papers, unpublished manuscripts, or references to correspondence (cited as *In litt.*).

#### DOCUMENTS ON WHICH THE IUCN RED LIST IS BASED

The listing of species in the IUCN Red List of Threatened Animals is based on the information contained in the publications listed below, and on the advice and guidance of the Species Specialist Groups of the IUCN Species Survival Commission. The IUCN/SSC has published recently numerous Species Action Plans which contain extensive information on the conservation status of species. The listings of threatened birds are provided by the International Council for Bird Preservation (ICBP).

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#### **Amphibians and Reptiles**

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#### TAXONOMY

The systems of classification and nomenclature principally follow the undermentioned authors.

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#### **IUCN THREATENED SPECIES CATEGORIES**

Species identified as threatened by IUCN are assigned a category indicating the degree of threat. Definitions are as follows:

#### EXTINCT (Ex)

Species not definitely located in the wild during the past 50 years (criterion as used by the Convention on International Trade in Endangered Species of Wild Fauna and Flora).

N.B. On a few occasions, the category Ex? has been assigned; this denotes that it is virtually certain that the taxon has recently become extinct.

#### **ENDANGERED (E)**

Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating.

Included are taxa whose numbers have been reduced to a critical level or whose habitats have been so drastically reduced that they are deemed to be in immediate danger of extinction. Also included are taxa that may be extinct but have definitely been seen in the wild in the past 50 years.

#### **VULNERABLE (V)**

Taxa believed likely to move into the "Endangered" category in the near future if the causal factors continue operating.

Included are taxa of which most or all the populations are decreasing because of over-exploitation, extensive destruction of habitat or other environmental disturbance; taxa with populations that have been seriously depleted and whose ultimate security has not yet been assured; and taxa with populations that are still abundant but are under threat from severe adverse factors throughout their range.

N.B. In practice, "Endangered" and "Vulnerable" categories may include, temporarily, taxa whose populations are beginning to recover as a result of remedial action, but whose recovery is insufficient to justify their transfer to another category.

#### RARE (R)

Taxa with small world populations that are not at present "Endangered" or "Vulnerable", but are at risk.

These taxa are usually localised within restricted geographical areas or habitats or are thinly scattered over a more extensive range.

#### INDETERMINATE (I)

Taxa known to be "Endangered", "Vulnerable" or "Rare" but where there is not enough information to say which of the three categories is appropriate.

#### INSUFFICIENTLY KNOWN (K)

Taxa that are *suspected* but not definitely known to belong to any of the above categories, because of lack of information.

**K\*** Taxa which are currently under review by ICBP and which will be designated a category in the near future.

#### THREATENED (T)

Threatened is a general term to denote species which are "Endangered", "Vulnerable", "Rare", "Indeterminate", or "Insufficiently Known" and should not be confused with the use of the same term by the U.S. Office of Endangered Species. In this volume it is also used to identify taxa comprised of several sub-taxa which have differing status categories.

#### COMMERCIALLY THREATENED (CT)

Taxa not currently threatened with extinction, but most or all of whose populations are threatened as a sustainable commercial resource, or will become so, unless their exploitation is regulated.

This category applies only to taxa whose populations are assumed to be relatively large.

N.B. In practise, this category has only been used for marine species of commercial importance that are being overfished in several parts of their ranges.

#### **ABBREVIATIONS**

Arch.	Archipelago
Eq. Guinea	Equatorial Guinea
F.R.G.	Federal Republic of Germany
F.S.M.	Federated States of Micronesia
I.	Island
Is	Islands
O.	Ocean
sp.	Unnamed species
U.A.E.	United Arab Emirates
U.K.	United Kingdom
U.S.A.	United States of America
U.S.S.R.	Union of Soviet Socialist Republics
	Former Distribution
*	An important, introduced population

## 1990 IUCN RED LIST OF THREATENED ANIMALS

#### **MAMMALS**

# Phylum CHORDATA

## Class MAMMALIA

Order MONOTREMATA Family Tachyglossidae Zaglossus bruijni

Family Macropodidae Order MARSUPIALIA

Dendrolagus goodfellowi shawmayeri Dendrolagus dorianus notatus Caloprymnus campestris Bettongia penicillata Bettongia lesueur Dorcopsis atrata

Lagostrophus fasciatus Lagorchestes asomatus Lagorchestes leporides Jorcopsulus macleayi Lagorchestes hirsutus Onychogalea fraenata Petrogale persephone Onychogalea lunata Macropus greyi

Family Phalangeridae Phalanger lullulae

Potorous longipes Potorous platyops Phalanger permixtio Phalanger rufoniger Phalanger vestitus

> Long-beaked Echidna

Goodfellow's Tree-kangaroo Slack Dorcopsis Wallaby Joria's Tree-kangaroo Brush-tailed Bettong Desert Rat-kangaroo **Surrowing Bettong** Papuan Dorcopsis

Crescent Nailtail Wallaby Proserpine Rock-wallaby **Bridled Nailtail Wallaby** Eastern Hare-wallaby Banded Hare-wallaby Central Hare-wallaby Rufous Hare-wallaby Long-footed Potoroo Toolache Wallaby

**Broad-faced Potoroo** 

Woodlark Island Cuscus

Black-spotted Cuscus Cuscus Cuscus

New Guinea

Papua New Guinea Papua New Guinea New Guinea Australia Australia

Australia

Papua New Guinea Australia]

Australia Australia

Australia Australia

Australia

Australia] Australia Australia

Australia]

Woodlark I. (Papua New Guinea) 冝

Papua New Guinea 昆昆昆

New Guinea

New Guinea

Family Petauridae Gymnobelideus leadbeateri	Leadbeater's Possum	>	Australia
Family Vombatidae Lasiorhinus krefftii	Northern Hairy-nosed Wombat	ঘ	Australia
Family Peramelidae Chaeropus ecaudatus Echymipera clara Perameles bougainville	Pig-footed Bandicoot White-lipped Bandicoot Western Barred Bandicoot Desert Bandicoot	A R E	[Australia] New Guinea Australia [Australia]
Family Thylacomyidae Macrotis lagotis Macrotis leucura	Greater Bilby Lesser Bilby	e č	Australia [Australia]
Family Dasyuridae Antechinus apicalis Phascogale calura Sminthopsis douglasi Sminthopsis longicaudata Sminthopsis psammophila	Dibbler Red-tailed Phascogale Julia Creek Dunnart Long-tailed Dunnart Sandhill Dunnart	HHHHH	Australia Australia Australia Australia
Family Myrmecobiidae Myrmecobius fasciatus	Numbat	E	Australia
Family Thylacinidae Thylacinus cynocephalus	Thylacine	Ex	[Tasmania]

Liberia

er INSECTIVORA	uily Solenodontidae
Order	Family

Solenodon cubanus Solenodon paradoxus

## Family Tenrecidae

Geogale aurita aurita
Geogale aurita orientalis
Limnogale mergulus
Microgale brevicaudata
Microgale drouhardi
Microgale gracilis
Microgale longicaudata
Microgale longicaudata
Microgale majori
Microgale melanorrhachis
Microgale pervula
Microgale principula

### Family Potamogalidae Micropotamogale lamottei Micropotamogale ruwenzorii

Cuban Solenodon	臼	Cuba
Haitian Solenodon	ഥ	Hispaniola
Large-eared Tenrec	X	Madagascar
Eastern Large-eared Tenrec	Н	Madagascar
Aquatic Tenrec	Н	Madagascar
Short-tailed Shrew-tenrec	K	Madagascar
Large-footed Shrew-tenrec	K	Madagascar
Drouhard's Shrew-tenrec	X	Madagascar
Gracile Shrew-tenrec	X	Madagascar
Lesser Long-tailed Shrew-tenrec	X	Madagascar
Long-nosed Shrew-tenrec	X	Madagascar
Major's Lesser Long-tailed Shrew-tenrec	×	Madagascar
Striped Shrew-tenrec	X	Madagascar
Western Short-tailed Shrew-tenrec	Η	Madagascar
Pygmy Shrew-tenrec	X	Madagascar
Greater Long-tailed Shrew-tenrec	X	Madagascar
Northern Lesser Long-tailed Shrew-tenrec	Ι	Madagascar
Dark Pygmy Shrew-tenrec	X	Madagascar
Long-tailed Shrew-tenrec	X	Madagascar
Taivi Shrew-tenrec	K	Madagascar
Thomas's Shrew-tenrec	K	Madagascar
Nimba Otter-shrew Riwenzori Otter-shrew	闰山	Guinea, Cote d'Ivoire, I Uganda, Zaire
The course of th	1	

## Family Chrysochloridae Amblysomus gunningi Amblysomus iris Amblysomus julianae Chlorotalpa duthiae Chlorotalpa sclateri Chlorotalpa stateri Chlorotalpa tytonis Chrysochloris visagiei Chrysospalax trevelyani Chrysospalax villosus Cryptochloris wintoni

Family Erinaceidae Atelerix frontalis Podogymnura truei

Family Talpidae Desmana moschata Galemys pyrenaicus Family Soricidae
Crocidura ansellorum
Crocidura baileyi
Crocidura congobelgica
Crocidura crenata
Crocidura eisentrauti
Crocidura glassi
Crocidura glassi

South Africa	South Africa	South Africa	South Africa	Mozambique, Zimbabwe, South Africa	South Africa	Somalia	South Africa	South Africa	South Africa	South Africa	South Africa	South Africa, Namibia
П	H	H	<b>X</b>	ద	Ι	I	Ι	R	Λ	H	Н	24
Gunning's Golden Mole	Zulu Golden Mole	Juliana's Golden Mole	Duthie's Golden Mole	Yellow Golden Mole	Sclater's Golden Mole	Somali Golden Mole	Visagie's Golden Mole	Giant Golden Mole	Rough-haired Golden Mole	De Winton's Golden Mole	Van Zyl's Golden Mole	Grants' Golden Mole

South African Hedgehog R
Mindanao Gymnure V
Russian Desman V
Pyrenean Desman V

France, Portugal, Spain

U.S.S.R.

Southern Africa Philippines K Zambia
K Ethiopia
K Zaire
K Gabon
K Cameroon
K Ethiopia
K Cameroon, C. African Rep., Gabon

Eremitalpa granti

Cryptochloris zyli

Rwanda, Uganda, Zaire Kenya, Tanzania, Zaire Cameroon, Eq. Guinea Crete I. (Greece) Rwanda, Zaire Cote d'Ivoire South Africa W. Africa Cameroon Sao Tome **Tanzania Tanzania Panzania Tanzania Fanzania** Ethiopia 3thiopia Ethiopia Uganda Nigeria Kenya Sabon Zaire Zaire Zaire Zaire Zaire Zaire Zaire Giant African Forest Shrew Long-tailed Forest Shrew Maquassie Musk Shrew Gabon Dwarf Shrew Crocidura odorata goliath Crocidura maquassiensis Crocidura zimmermanni Myosorex longicaudatus Procidura stenocephala Paracrocidura maxima Crocidura manengubae Paracrocidura graueri Crocidura tansaniana Crocidura usambarae Crocidura thomensis Myosorex eisentrauti Crocidura wimmeri Crocidura longipes Myosorex schalleri Crocidura kivuana Crocidura phaeura Sylvisorex howelli Crocidura nimbae Procidura telfordi Crocidura raineyi Crocidura lanosa Crocidura latona Crocidura monax Crocidura selina Crocidura thalia Crocidura lucina Crocidura ludia Crocidura polia Myosorex geata Myosorex polli Suncus remyi

Sylvisorex suncoides Sylvisorex ollula

## Family Macroscelididae

Petrodromus tetradactylus sangi Rhynchocyon cirnei hendersoni Rhynchocyon cirnei cirnei Rhynchocyon chrysopygus Rhynchocyon petersi

## Order CHIROPTERA Family Pteropodidae

Otopteropus cartilagonodus Dobsonia exoleta chapmani Alionycteris paucidentata Oyacopterus spadiceus Dyacopterus brooksi Megaerops kusnotoi Aproteles bulmerae Pteropus insularis Latidens salimalii Nyctimene rabori Acerodon lucifer Dobsonia minor

Pteropus phaeocephalus Pteropus molossinus Pteropus pilosus Pteropus niger

Slack-and-Rufous Elephant-shrew Golden-rumped Elephant-shrew Chequered Elephant-shrew Chequered Elephant-shrew Four-toed Elephant-shrew

Panay Giant Fruit Bat

Lesser Naked-backed Fruit Bat Chapman's Fruit Bat **Bulmer's Fruit Bat** 

Dayak Fruit Bat

Philippines Tube-nosed Fruit Bat Javan Tail-less Fruit Bat

Comoro Black Flying Fox Big-eared Flying Fox Marianna Flying Fox **Pruk Flying Fox** 

Pteropus livingstonei

Pteropus mariannus

Pteropus macrotis

Large Palau Flying Fox Mauritian Flying Fox Mortlock Flying Fox Pohnpei Flying Fox

Rwanda, Uganda, Zaire Kenya Kenya

Cameroon, Gabon, Zaire

Mozambique

Malawi

Kenya, Tanzania, Pemba I., Zanzibar

Panay I. (Philippines)] Mindanao (Philippines) Negros I. (Philippines) Irian Jaya (Indonesia) Sumatra (Indonesia) New Guinea

Negros I. (Philippines) Juzon (Philippines) Iruk Is (F.S.M.) Comoro Is

Java (Indonesia)

Malaya, Borneo

S. India

N. Mariana Is, Palau, Caroline Is, New Guinea, Aru Is Suam, Ryukyu Is

Mortlock and Pohnpei Is (F.S.M.) Mortlock Is (F.S.M.) Mauritius

Palau I. (F.S.M.)]

<ul> <li>E Rodrigues</li> <li>E American Samoa, W. Samoa, Fiji</li> <li>V Aldabra I. (Seychelles)</li> <li>Ex [Mauritius, Reunion]</li> <li>Ex [Guam (U.S.A.)]</li> <li>I Karkar I. (New Guinea) to Samoa</li> <li>E Pemba I. (Tanzania)</li> </ul>	<ul><li>E Seychelles</li><li>K New Guinea</li><li>K Seram I., New Guinea, Solomons</li></ul>	R Thailand	V N. Australia	R Biak I. (Indonesia) I Singapore, Pen. Malaysia, Sabah K N. Australia	V S. U.S.A. to Guatemala V S. U.S.A. to El Salvador K Jamaica Ex? Puerto Rico K Cuba, Hispaniola
Rodrigues Flying Fox Samoan Flying Fox Seychelles Flying Fox Lesser Mascarene Flying Fox Guam Flying Fox Insular Flying Fox Pemba Flying Fox	Seychelles Sheath-tailed Bat Greater Sheath-tailed Bat Raffray's Sheath-tailed Bat	Kitti's Hog-nosed Bat	Ghost Bat	Geelvinck Bay Leaf-nosed Bat Ridley's Leaf-nosed Bat Orange Leaf-nosed Bat	Mexican Long-nosed Bat Little Long-nosed Bat Jamaican Flower Bat Puerto Rican Flower Bat Cuban Flower Bat
Pteropus rodricensis Pteropus samoensis Pteropus seychellenis aldabrensis Pteropus subniger Pteropus tokudae Pteropus tonganus	Family Emballonuridae Coleura seychellensis Emballonura furax Emballonura raffrayana	Family Craseonycteridae Craseonycteris thonglongyai	Family Megadermatidae Macroderma gigas	Family Hipposideridae Hipposideros papua Hipposideros ridleyi Rhinonicteris aurantia	Family Phyllostomatidae Leptonycteris nivalis Leptonycteris yerbabuenae Phyllonycteris aphylla Phyllonycteris major

Family Vespertilionidae

Kerivoula africana

Myzopoda aurita

Family Mystacinidae

Lasiurus cinereus semotus

Myotis dasycneme

Myotis grisescens

Myotis hermani

Myotis capaccinii

Myotis bartelsii

Glischropus javanus

Tanzanian Woolly Bat Sucker-footed Bat Javan Thick-thumbed Bat Hawaiian Hoary Bat Bartel's Myotis Long-fingered Bat Pond Bat Grey Bat Herman's Myotis Mouse-eared Bat Indiana Bat Townsend's Big-eared Bat Indiana Bat Townsend's Big-eared Bat Mew Zealand Lesser Short-tailed Bat New Zealand Greater Short-tailed Bat Javan Mastiff Bat  Hairy-eared Dwarf Lemur Coquerel's Dwarf Lemur Fork-marked Dwarf Lemur Grey-backed Sportive Lemur Milne-Edwards' Sportive Lemur White-footed Sportive Lemur	Ex? Tanzania V Madagascar	K Java (Indonesia) I Hawaii (U.S.A.) K Java (Indonesia) V Europe, S. Asia Minor, N.W. Africa K Europe to Siberia E U.S.A. R N.W. Sumatra (Indonesia) K Europe to Ukraine V U.S.A. I Canada, Mexico, U.S.A.	Em [New Zealand] V New Zealand K Java (Indonesia)	E Madagascar V Madagascar R Madagascar	V Madagascar R Madagascar R Madagascar
	Tanzanian Woolly Bat Sucker-footed Bat	Javan Thick-thumbed Bat Hawaiian Hoary Bat Bartel's Myotis Long-fingered Bat Pond Bat Grey Bat Herman's Myotis Mouse-eared Bat Indiana Bat Townsend's Big-eared Bat	New Zealand Lesser Short-tailed Bat New Zealand Greater Short-tailed Bat Javan Mastiff Bat	Hairy-eared Dwarf Lemur Coquerel's Dwarf Lemur Fork-marked Dwarf Lemur	Grey-backed Sportive Lemur Milne-Edwards' Sportive Lemur White-footed Sportive Lemur

Myotis sodalis Myotis myotis

Plecotus townsendii

Family Molossidae

Mystacina tuberculata

Otomops formosus

Mystacina robusta

Family Megaladapidae

Lepilemur edwardsi

Lepilemur dorsalis

Lepilemur leucopus

Family Cheirogaleidae

Allocebus trichotis

Mirza coquereli Phaner furcifer

Order PRIMATES

Lepilemur microdon Lepilemur mustelinus Lepilemur ruficaudatus Lepilemur septentrionalis	Microdon Sportive Lemur Weasel Sportive Lemur Red-tailed Sportive Lemur Northern Sportive Lemur	***	Madagascar Madagascar Madagascar Madagascar
Family Lemuridae Hapalemur aureus Hapalemur griseus alaotrensis	Golden Bamboo Lemur Alaotran Gentle Lemur	घ घ	Madagascar Madagascar
Hapalemur griseus griseus Hapalemur griseus occidentalis	Grey Gentle Lemur Western Gentle Lemur	저〉대	Madagascar Madagascar Wadagascar
Lemur catta Lemur catta	Ring-tailed Lemur	) > E	Madagascar Madagascar Madagascar
Lemur fuluus albifrons	White-fronted Lemur	1 Et	Madagascar
Lemur fulvus albocollaris Lemur fulvus collaris	White-collared Lemur Collared Lemur	>>	Madagascar Madagascar
Lemur fulous fulous Lemur fulous mayottensis	Brown Lemur Mavotte Lemur	<b>X</b> >	Madagascar Madagascar
Lemur fulous rufus	Red-fronted Lemur	H P	Madagascar
Lemur fulvus sanjorai Lemur macaco	Sanord's Lemur Black Lemur	> >	Madagascar Madagascar
Lemur macaco flavifrons	Sclater's Lemur	时时	Madagascar
Lemur mongoz Lemur rubriventer	Mongoose Lemur Red-bellied Lemur	되 >	Madagascar, Comoro Is Madagascar
Varecia variegata	Ruffed Lemur	ल	Madagascar
Family Indriidae	4 11 421	11	
Abdni idniger Indri indri	Wouly Lemar Indri	> 되	Madagascar
Propithecus diadema	Diademed Sifaka	田田	Madagascar
Propithecus tattersalli Propithecus verreauxi	Golden Crowned Sifaka Verreaux's Sifaka	ন >	Madagascar Madagascar

E Madagascar	K West Africa K East Africa V East Africa V Indochina	I Sulawesi (Indonesia) E Philippines	W Brazil K Belize, Guatemala, Mexico V South America V Panama, Colombia, Ecuador V Central America, Mexico V South America E Brazil V Brazil, Colombia, Peru V Brazil, Colombia, Venezuela E Brazil E Brazil V Brazil E Brazil E Costa Rica, Panama E Costa Rica, Panama
Aye-aye	Angwantibo Thomas's Bushbaby Zanzibar Bushbaby Pygmy Loris	Lesser Spectral Tarsier Philippine Tarsier	Brown Howler Monkey Guatemalan Black Howler Monkey Long-haired Spider Monkey Brown-headed Spider Monkey Geoffroy's Spider Monkey Black Spider Monkey Woolly Spider Monkey Red and White Uakari Black-headed Uakari Masked Titi White-nosed Saki Southern Bearded Saki Southern Bearded Saki Yellow-tailed Woolly Monkey Woolly Monkey
Family Daubentoniidae Daubentonia madagascariensis	Family Lorisidae Arctocebus calabarensis Galago thomasi Galago zanzibaricus Nycticebus pygmaeus	Family Tarsiidae Tarsius pumilus Tarsius syrichta	Family Cebidae Alouatta fusca Alouatta villosa Ateles belzebuth Ateles fusciceps Ateles paniscus Brachyteles arachnoides Cacajao calvus Cacajao melanocephalus Chiropotes albinasus Chiropotes satanas satanas Lagothrix flavicauda Lagothrix lagotricha Saimiri oerstedi

Family Callitrichidae Callimico goeldii Callithrix argentata leucippe Callithrix aurita	Callithrix flaviceps Callithrix humeralifer chrysoleuca Callithrix humeralifer intermedius	Leontopithecus caissara Leontopithecus chrysomelas Leontopithecus chrysopygus	Leontopithecus rosalia Saguinus bicolor	Saguinus imperator Saguinus leucopus Saguinus oedipus oedipus
Fa Callim Callith Callith	Callith Callith Callith	Leonto Leonto Leonto	Leonto, Saguin	Saguin Saguin Saguin

# Family Cercopithecidae

Allenopithecus nigroviridis Cercocebus aterrimus Cercocebus galeritus galeritus Cercocebus galeritus sanje Cercocebus torquatus Cercopithecus diana Cercopithecus erythrotis Cercopithecus erythrotis Cercopithecus erythrotis

Cercopinecus erythrotis Cercopithecus erythrotis sclateri Cercopithecus hamlyni Cercopithecus lhoesti Cercopithecus preussi Cercopithecus salongo

Goeldi's Marmoset	21 12	South America
moset	> t	Brazil
Buily-tuited-ear Marmoset	Ħ	Brazil
Buffy-headed Marmoset	臼	Brazil
Santarem Marmoset	×	Brazil
Santarem Marmoset	K	Brazil
Black-faced Lion Tamarin	田	Brazil
Golden-headed Lion Tamarin	臼	Brazil
Black Lion Tamarin	田	Brazil
Golden Lion Tamarin	臼	Brazil
Pied Tamarin	臼	Brazil
Emperor Tamarin	H	Bolivia, Brazil, Peru
White-footed Tamarin	Ħ	Colombia
Cottontop Tamarin	田	Colombia

K Angola, Congo, Zaire

K N. Angola, C. Zaire E Kenya

Tanzania

Sanje Crested Mangabey

Collared Mangabey

Diana Monkey

Tana River Mangabey

Black Mangabey

Allen's Swamp Monkey

V West Africa
V West Africa
E Benin, Nigeria

V Cameroon, Bioko, Nigeria E Nigeria

White-throated Guenon

Owl-faced Guenon L'Hoest's Guenon

Preuss's Guenon Salongo Guenon

Russet-eared Guenon

White-throated Guenon

V Rwanda, Uganda, Zaire V Burundi, Rwanda, Uganda, Zaire

E Cameroon, Bioko, Nigeria V Zaire

Sun-tailed Guenon

	District Colores	Ē	Common Common Da Critican Cohon
Colobus satanas	DIACK COLODUS	1	Cause von, Cougo, Dq. Causea, Gason
Mandrillus leucophaeus	Drill	田	Cameroon, Eq. Guinea, Nigeria
Mandrillus sphinx	Mandrill	^	Cameroon, Congo, Eq. Guinea, Gabon
Panio hamadryas	Hamadryas Baboon	æ	Ethiopia, Somalia, S. Arabia
Procolobus (b.) badius badius	Bay Colobus	>	Guinea, Cote d'Ivoire, Liberia, Sierra
			Leone
Procolobus [b.] badius temminckii	Temminck's Red Colobus	ద	Gambia, Guinea, Guinea-Bissau,
			Senegal
Procolobus [b.] badius waldroni	Miss Waldron's Bay Colobus	ല	Ghana, Cote d'Ivoire
Procolobus [b.] gordonorum	Uhehe Red Colobus	臼	Tanzania
Procolobus [b.] kirkii	Zanzibar Red Colobus	田	Zanzibar
Procolobus [b.] pennanti	Pennant's Red Colobus	凶	Cameroon
Procolobus [b.] pennanti bouvieri	Bouvier's Red Colobus	凶	Congo
Procolobus [b.] pennanti pennanti	Pennant's Red Colobus	凶	Eq. Guinea
Procolobus [b.] pennanti preussi	Preuss's Red Colobus	臼	Cameroon, Nigeria
Procolobus [b.] rufomitratus	Eastern Red Colobus	^	East & Central Africa
Procolobus [b.] rufomitratus ellioti	Elliot's Red Colobus	K	Uganda, Zaire
Procolobus [b.] rufomitratus foai	Foa Red Colobus	X	Zaire
Procolobus [b.] rufomitratus oustaleti	Oustalet's Red Colobus	X	Sudan, Zaire
Procolobus [b.] rufomitratus rufomitratus	Tana River Red Colobus	妇	Kenya
Procolobus [b.] rufomitratus tephrosceles	Uganda Red Colobus	Λ	Burundi, Tanzania, Uganda, Zaire
Procolobus [b.] rufomitratus tholloni	Thollon's Red Colobus	K	Zaire
Procolobus [badius] badius	Western Red Colobus	>	West Africa
Procolobus verus	Olive Colobus	<b>R</b>	West Africa
Theropithecus gelada	Gelada Baboon	R	Ethiopia
Macaca brunnescens	Muna-Butung Macaque	X	Sulawesi (Indonesia)
Macaca cyclopis	Taiwan Macaque	Λ	Taiwan
Macaca fuscata vakui	Yakushima Macaque	函	Japan
Macaca hecki	Heck's Macaque	^	Sulawesi (Indonesia)
Масаса таига	Moor Macaque	Λ	Sulawesi (Indonesia)

Mentawai Is (Indonesia) S. India Algeria, Gibraltar*, Morocco China Borneo Java (Indonesia)	Mentawai Is (Indonesia) C. Vietnam, E.C. Laos S. Vietnam, S. Laos, E. Cambodia N. Vietnam	China China China Mentawai Is (Indonesia) Indochina Bhutan, India	S. India S. China China, Indochina	Bangladesh to Yunnan (China) Mentawai Is (Indonesia) Java (Indonesia) Indochina, Thailand Borneo, Sumatra	Equatorial Africa Rwanda, Uganda, Zaire E. Zaire Congo, Zaire
<b>田田&gt;☆&gt;田</b>	医医闭闭区	因因Vघघ氏	되면 >	> 12 12 12 12	> 🗵 🖂 >
Mentawai Macaque Lion-tailed Macaque Barbary Macaque Tibetan Macaque Proboscis Monkey	Mentawai Leaf Monkey Red-shanked Douc Langur Black-shanked Douc Monkey Tonkin Snub-nosed Monkey	Yunnan Snub-nosed Monkey Guizhou Snub-nosed Monkey Sichuan Golden Snub-nosed Monkey Pig-tailed Langur Tonkin Leaf Monkey	Nilgiri Leaf Monkey White-headed Black Leaf Monkey Black Gibbon	Hoolock Gibbon Kloss's Gibbon Javan Gibbon Pileated Gibbon Orang-utan	Gorilla Mountain Gorilla Eastern Lowland Gorilla Pygmy Chimpanzee

Pygathrix nigripes Rhinopithecus avunculus

Presbytis potenziani

Macaca thibetana

Nasalis larvatus Presbytis comata

Macaca sylvanus

Macaca pagensis

Macaca silenus

Pygathrix nemaeus

Rhinopithecus roxellanae

Simias concolor

Rhinopithecus brelichi

Rhinopithecus bieti

Trachypithecus francoisi

Trachypithecus leucocephalus

Trachypithecus geei Trachypithecus johnii Family Hylobatidae

Hylobates concolor

Hylobates hoolock

Hylobates klossi

Gorilla gorilla berengei

Gorilla gorilla

Gorilla gorilla graueri

Pan paniscus

Family Pongidae

Hylobates pileatus

Pongo pygmaeus

Hylobates moloch

V Equatorial Africa E West Africa	V Central & South America	E Brazil	<ul><li>K Argentina, Bolivia, Paraguay</li><li>K Argentina</li><li>V South America</li><li>I Brazil</li></ul>	V China R China Ex [Sardinia, Corsica]	E South Africa E Himalayan foothills E Mexico I Sumatra (Indonesia) E Ryukyu Is (Japan) E Mexico E Tres Marias Is (Mexico) Ex [Mexico] E U.S.A.
Chimpanzee West African Chimpanzee	Giant Anteater	Maned Sloth	Burmeister's Armadillo Pink Fairy Armadillo Giant Armadillo Brazilian Three-banded Armadillo	Kozlov's Pika Sardinian Pika	Riverine Rabbit Hispid Hare Tehuantepec Hare Sumatran Short-eared Rabbit Amami Rabbit Volcano Rabbit Tres Marias Cottontail Omilteme Cottontail Lower Keys Rabbit
Pan troglodytes Pan troglodytes verus	Order EDENTATA Family Myrmecophagidae Myrmecophaga tridactyla	Family Bradypodidae Bradypus torquatus	Family Dasypodidae Chlamyphorus retusus Chlamyphorus truncatus Priodontes giganteus Tolypeutes tricinctus	Order LAGOMORPHA Family Ochotonidae Ochotona koslowi Ochotona muliensis Prolagus sardus	Family Leporidae Bunolagus monticularis Caprolagus hispidus Lepus flavigularis Nesolagus netscheri Pentalagus furnessi Romerolagus diazi Sylvilagus graysoni Sylvilagus insonus

Aplodontia rufa nigra Aplodontia rufa phaea

### Family Sciuridae

Eutamias quadrivittatus australis Glaucomys volans guerreroensis Eutamias minimus atristriatus Glaucomys sabrinus coloratus Haucomys volans oaxacensis Glaucomys volans goldmani Glaucomys sabrinus fuscus Ratufa indica elphinstonei Marmota vancouverensis Syntheosciurus brochus Ratufa indica dealbata Sciurus niger cinereus Cynomys mexicanus Cynomys parvidens Marmota menzbieri

## Family Geomyidae

Tamiasciurus hudsonicus grahamensis

Thomomys umbrinus emotus Zygogeomys trichopus

# Family Heteromyidae

Dipodomys heermanni morroensis Dipodomys gravipes Dipodomys elator

California (U.S.A.	California (U.S.A.
н	Ι
Point Arena Mountain Beaver	Point Reyes Mountain Beaver

Point Arena Mountain Beaver Point Reyes Mountain Beaver	нн	California (U.S.A.) California (U.S.A.)
Mexican Prairie Dog	臼	Mexico
Utah Prairie Dog	>	U.S.A.
Least Chipmunk	囶	New Mexico (U.S.A.)
Colorado Chipmunk	田	New Mexico (U.S.A.)
Carolina Northern Flying Squirrel	闰	U.S.A.
Virginia Northern Flying Squirrel	臼	U.S.A.
Mexican Flying Squirrel	Ж	Mexico
	þ	Marrison

Menzbier's Marmot	Vancouver Island Marmot	Dangs Giant Squirrel	Maharasthra Giant Squirrel	Delmarva Fox Squirrel	Mountain Squirrel	Mount Graham Red Squirrel
Menz	Vance	Dang	Maha	Delm	Mour	Mour

Southern Pocket Gopher	Michoacan Pocket Gopher	

Texas Kangaroo Rat	ద	Texas (
San Quintin Kangaroo Rat	田	Baja Ce
Morro Bay Kangaroo Rat	闰	Califori

Iountain Beaver Iountain Beaver	нн	California (U.S.A.) California (U.S.A.)
6	F	
ie Dog	¥	Mexico
Jog	<b>&gt;</b>	U.S.A.
nk	田	New Mexico (U.S.A.)
munk	田	New Mexico (U.S.A.)
hern Flying Squirrel	띰	U.S.A.
nern Flying Squirrel	田	U.S.A.
g Squirrel	R	Mexico
•	R	Mexico
	æ	Mexico
armot	^	Kazakhstan, Uzbekistan (U.!
and Marmot	臼	Vancouver I. (Canada)
Squirrel	囶	India
Giant Squirrel	囶	India
Squirrel	闰	U.S.A.
irrel	K	Costa Rica, Panama
m Red Squirrel	臼	Arizona (U.S.A.)
ket Gopher	24	New Mexico (U.S.A.)
cket Gopher	Ι	Mexico

S.S.R.)

Perognathus longimembris brevinasus Perognathus inornatus psammophilus Peromyscus gossypinus allapaticola Peromyscus polionotus niveiventris Peromyscus polionotus ammobates Dipodomys nitratoides nitratoides Peromyscus polionotus allophrys Castor canadensis mexicanus Dipodomys nitratoides exilis Castor canadensis frondator Dipodomys microps leucotis Neotoma floridana smalli Family Castoridae Veotoma fuscipes riparia Family Cricetidae Peromyscus pembertoni Veotoma martinensis Dipodomys stephensi Perognathus alticola Oryzomys argentatus Dipodomys ingens Castor fiber bindai Neotoma anthonyi Oryzomys nelsoni Neotoma bunkeri

Reithrodontomys megalotis limicola

Reithrodontomys raviventris

Sigmodon arizonae plenus

Peromyscus polionotus trissyllepsis

Peromyscus polionotus phasma

Giant Kangaroo Rat	H	California (U.S.A.)
Houserock Chisel-toothed Kangaroo Rat Fresno Kangaroo Rat	K F	Arizona (U.S.A.)
Tipton Kangaroo Rat	ម	California (U.S.A.)
Stephens Kangaroo Rat	田	California (U.S.A.)
White-eared Pocket Mouse	Λ	California (U.S.A.)
Salinas Pocket Mouse	闰	
Los Angeles Pocket Mouse	臼	California (U.S.A.)
Broad-tail Beaver	더	Mexico
Rio Grande Beaver	闰	Mexico
	闰	Mongolia
Anthony's Wood Rat	ല	Mexico
Bunker's Wood Rat	田	Mexico
Key Largo Wood Rat	闰	U.S.A.
San Joaquin Valley Wood Rat	>	California (U.S.A.)
San Martin Island Wood Rat	臼	Mexico
Silver Rice Rat	Н	Florida (U.S.A.)
Nelson's Rice Rat	Ex?	Mexico
Key Largo Cotton Mouse	មា	U.S.A.
Pemberton's Deer Mouse	Ex	[Mexico]
Choctawhatchee Beach Mouse	臼	U.S.A.
Alabama Beach Mouse	ម	U.S.A.
Southeastern Beach Mouse	н	U.S.A.
Anastasia Island Beach Mouse	臼	U.S.A.
Perdido Key Beach Mouse	ជា	U.S.A.
Southern Marsh Harvest Mouse	>	California (U.S.A.)
Salt-marsh Harvest Mouse	闰	California (U.S.A.)
Colorado River Cotton Rat	闰	California (U.S.A.)

Family Arvicolidae	Microtus breweri	Microtus californicus scirpensis	Microtus mexicanus hualpaiensis	Microtus mexicanus navaho	Microtus pennsylvanicus chihuahuensis	Family Arvicolidae Microtus breweri Microtus californicus scirpensis Microtus mexicanus hualpaiensis Microtus mexicanus navaho Microtus pennsylvanicus chihuahuensis Microtus pennsylvanicus dukecampbelli	nsis belli
Microtus breweri Microtus californicus scirpensis Microtus mexicanus hualpaiensis Microtus mexicanus navaho Microtus pennsylvanicus chihuahuensis	Microtus californicus scirpensis Microtus mexicanus hualpaiensis Microtus mexicanus navaho Microtus pennsylvanicus chihuahuensis	Microtus mexicanus hualpaiensis Microtus mexicanus navaho Microtus pennsylvanicus chihuahuensis	Microtus mexicanus navaho Microtus pennsylvanicus chihuahuensis	Microtus pennsylvanicus chihuahuensis		Microtus pennsylvanicus dukecampbe	belli

#### Family Muridae Batomys granti

Pitymys bavaricus

Leggadina lakedownensis eporillus conditor Leporillus apicalis Conilurus albipes

Macruromys elegans Melomys albidens

Notomys amplus Votomys aquilo

Notomys longicaudatus Notomys fuscus

Notomys macrotis Notomys mordax

Pseudomys fumeus Pseudomys fieldi

Pseudomys occidentalis Pseudomys gouldii

Pseudomys pilligaensis Pseudomys shortridgei Pseudomys praeconis Pseudomys oralis

Hualapai Mexican Vole Amargosa Vole Mexican Vole Beach Vole

Florida Saltmarsh Vole

Philippines

Australia Australia] Australia

Australia Australia

Australia] Australia

Australia Australia

Australia

Australia

Australia

Australia

Australia Australia

Australia Australia

Australia Australia

California (U.S.A.) Arizona (U.S.A.) Arizona (U.S.A.)

民田田

Florida (U.S.A.)

西西亞

Mexico

F.R.G.

Bavarian Pine Vole

Lesser Small-toothed Rat akeland Downs Mouse Greater Stick-nest Rat Rabbit-eared Tree-rat lesser Stick-nest Rat Luzon Forest Rat

Short-tailed Hopping-mouse White-toothed Melomys

Jong-tailed Hopping-mouse Northern Hopping-mouse **Jusky Hopping-mouse** 

Big-eared Hopping-mouse

Oarling Downs Hopping-mouse Alice Springs Mouse

Western Mouse Fould's Mouse Smoky Mouse

Hastings River Mouse Pilliga Mouse

Shark Bay Mouse Heath Rat

Australia

R Australia E Australia E Ryukyu Is (Japan) R Australia R Australia E Australia	E New Mexico (U.S.A.) I California (U.S.A.)	I Brazil	E Brazil, Peru, Ecuador, Venezuela	I Andes I Chile	E Cuba E Cuba I Jamaica E Cuba I Cuba I Cuba R Cuba E Cuba R Jamaica
Giluwe Rat Poncelet's Giant Rat Ryukyu Spiny Rat Rock-dwelling Rat False Water-rat Central Rock-rat	Meadow Jumping Mouse Point Reyes Jumping Mouse	Thin-spined Porcupine		Short-tailed Chinchilla Long-tailed Chinchilla	Cabrera's Hutia Large-eared Hutia Jamaican Hutia Garrido's Hutia Chapman's Prehensile-tailed Hutia Bushy-tailed Hutia Isla de la Juventud Tree Hutia Dwarf Hutia Little Earth Hutia
Rattus giluwensis Solomys ponceleti Tokudaia osimensis muenninki Xenuromys barbatus Xeromys myoides Zyzomys pedunculatus	Family Zapodidae Zapus hudsonicus luteus Zapus trinotatus orarius	Family Erithizontidae Chaetomys subspinosus	Family Dinomyidae Dinomys branickii	Family Chinchillidae Chinchilla brevicaudata Chinchilla lanigera	Family Capromyidae Capromys angelcabrerai Capromys auritus Capromys Brownii Capromys garridoi Capromys gundlachi Capromys melanurus Capromys meridonalis Capromys nanus Capromys sanfelipensis Capromys brownii

Bahamas Hispaniola	Argentina	South America	Yangtze R. (China) India, Bangladesh, Nepal, Bhutan Pakistan Argentina, Brazil, Uruguay	Coastal South Atlantic Coastal Chile Coastal South Africa & Namibia Coastal New Zealand Rivers & coasts from Bay of Bengal to	Coastal waters of N. Hemisphere Gulf of California (Mexico)	Arctic & sub-Arctic Ocean Arctic Ocean	North Atlantic
<b>8</b> 8	>	>	田V田R	<b>XXX&gt;X</b>	14日	XX	>
Bahamian Hutia Hispaniolan Hutia	Red Vizcacha Rat	Boto, Amazon River Dolphin	Baiji, Yangtze River Dolphin Ganges River Dolphin Indus River Dolphin Franciscana, La Plata Dolphin	Commerson's Dolphin Black Dolphin Heaviside's Dolphin Hector's Dolphin Irrawaddy Dolphin	Harbour Porpoise Vaquita	White Whale Narwhal	Northern Bottlenose Whale
Geocapromys ingrahami Plagiodontia aedium	Family Octodontidae Tympanoctomys barrerae	Order CETACEA Family Iniidae Inia geoffrensis	Family Platanistidae Lipotes vexillifer Platanista gangetica Platanista minor Pontoporia blainvillei	Family Delphinidae Cephalorhynchus commersonii Cephalorhynchus eutropia Cephalorhynchus heavisidii Cephalorhynchus hectori Orcaella brevirostris	Phocoena phocoena Phocoena sinus	Family Monodontidae Delphinapterus leucas Monodon monoceros	Family Ziphiidae Hyperoodon ampullatus

#### Family Balaenopteridae Order CARNIVORA Family Balaenidae Megaptera novaeangliae Balaenoptera musculus Balaenoptera physalus Family Canidae Eubalaena australis Eubalaena glacialis Balaena mysticetus Canis rufus Canis lupus

Southern Right Whale

Bowhead Whale

Humpback Whale

Blue Whale Fin Whale Northern Right Whale

Arctic, N. Atlantic & N. Pacific Oceans S.Atlantic, Pacific, Indian & Southern

All Oceans

All Oceans All Oceans N. Atlantic & N. Pacific Oceans

Oceans

		North America, Middle East, Eurasia	U.S.A.	Ethiopia	South America	Asia	[Falkland Is]	Argentina, Chile, Ecuador	South America	Ecuador, Peru	Brazil	North Africa	Subsaharan Africa	South America	California (U.S.A.)	India Pakistan, S. Nepal
		Grey Wolf	Red Wolf E	Simien Jackal	Maned Wolf V	Dhole	Falkland Island Wolf	Grey Zorro	Small-eared Zorro K	Sechuran Zorro K	Hoary Zorro K	Fennec Fox K	African Wild Dog E	Bush Dog V	Island Grey Fox R	Bengal Fox
Order CAMINI VORA	Family Canidae	Canis lupus	Canis rufus	Canis simensis	Chrysocyon brachyurus	Cuon alpinus	Dusicyon australis	Dusicyon griseus	Dusicyon (Atelocynus) microtis	Dusicyon sechurae	Dusicyon vetulus	Fennecus zerda	Lycaon pictus	Speothos venaticus	Urocyon littoralis	Vulpes bengalensis

U.S.S.R., Afghanistan, Iran, Pakistan

Blanford's Fox

Vulpes bengalensis

Vulpes corsac Vulpes pallida Vulpes rueppelli	Corsac Fox Pale Fox Ruepell's Fox	MMM	U.S.S.R., Mongolia, China North Africa North Africa and Middle East
Family Ursidae Ailuropoda melanoleuca Helarctos malayanus Melursus ursinus Tremarctos ornatus Ursus arctos nelsoni Ursus maritimus Ursus thibetanus gedrosianus	Giant Panda Sun Bear Sloth Bear Spectacled Bear Mexican Grizzly Bear Polar Bear Asiatic Black Bear Baluchistan Bear	因 > > > Q	China Eastern Asia India, Nepal, Sri Lanka South America [Mexico, U.S.A.] Arctic Southern Asia Iran, Pakistan
Family Procyonidae Ailurus fulgens Nasua nelsoni Procyon gloveralleni Procyon pygmaeus	Red Panda Cozumel Island Coati Barbados Raccoon Cozumel Island Raccoon	K E <sub>X</sub> ?	Nepal to China Cozumel I. (Mexico) Barbados Cozumel I. (Mexico)
Family Mustelidae Aonyx cinerea Conepatus mesoleucus telmalestes Gulo gulo Lutra felina Lutra lutra lutra Lutra perspicillata Lutra sumatrana Martes flavigula chrysospila Martes gwatkinsi	Oriental Small-clawed Otter Big Thicket Hog-nosed Skunk Wolverine Marine Otter La Plata Otter European Otter Smooth-coated Otter Southern River Otter Hairy-nosed Otter Taiwan Yellow-throated Marten Nilgrii Marten	H I K C K C C C I K	Asia Texas (U.S.A.) Eurasia, North America Coastal Chile & Peru, [Argentina] South America Eurasia Asia W. Argentina, C. & S. Chile South-east Asia Taiwan S. India

Martes melampus tsuensis Melogale everetti Melogale orientalis Mustela lutreola Mustela lutreolina Mustela nigripes Pteronura brasiliensis Vormela peregusna peregusna

### Family Viverridae

Arctogalidia trivirgata trilineata Bdeogale crassicauda omnivora Macrogalidia musschenbroekii Poiana richardsoni liberiensis Mungotictis decemlineata Galidictis grandidiensis Fenetta genetta isabelae Paradoxurus lignicolor Paradoxurus jerdoni Genetta abyssinica Chrotogale owstoni Inyptoprocta ferox Galidictis fasciata Bdeogale jacksoni Synogale bennettii Eupleres goudotii Genetta johnstoni Liberiictis kuhni Fossa fossana

Salanoia concolor

Viverra civettina

I Japan		K Java (Indonesia)	V Europe		E U.S.A.	V South America	V C. Europe to Greece & Turkey	I Java (Indonesia)	E N. Coastal Tanzania, Kenya		K Indochina	K Madagascar	K South-east Asia	V Madagascar	V Madagascar	Madagascar	K Madagascar		R Spain	K Liberia, Guinea	E Liberia, Cote d'Ivoire, Guinea	R Sulawesi (Indonesia)	V Madagascar	S. India	E Sumatra (Indonesia)	I Liberia, Cote d'Ivoire, Sierra Leone	K Madagascar	E West Ghats (India)
Tsushima Island Marten	Kinabalu Ferret-badger	Javan Ferret-badger	European Mink	Indonesian Mountain Weasel	Black-footed Ferret	Giant Otter	European Marbled Polecat	Javan Small-toothed Palm Civet	Sokoke Bushy-tailed Mongoose	Jackson's Mongoose	Owston's Palm Civet	Fossa	Otter Civet	Falanouc	Malagasy Civet	Malagasy Broad-striped Mongoose	Giant-striped Mongoose	Abyssinian Genet	Ibiza Common Genet	Johnston's Genet	Liberian Mongoose	Sulawesi Palm Civet	Malagasy Narrow-striped Mongoose	Jerdon's Palm Civet	Mentawai Palm Civet	Leighton's Linsang	Malagasy Brown-tailed Mongoose	Malabar Civet

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Hyaena hyaena barbara Hyaena brunnea

### Family Felidae

Acinonyx jubatus venaticus Felis margarita scheffeli Felis caracal michaelis Felis concolor cougar Felis concolor coryi Felis iriomotensis Acinonyx jubatus Felis jacobita Felis badia

relis marmorata Felis pardalis Telis pardina

elis rubiginosa Telis planiceps

Felis temmincki

Felis tigrina Felis wiedii

Panthera leo persica Felis yagouarundi Veofelis nebulosa

Danthera pardus Panthera onca

Panthera tigris Panthera uncia

Barbary Hyaena Brown Hyaena

Sornean Bay Cat Asiatic Cheetah

Cheetah

Furkmenian Caracal Lynx Plorida Cougar

Eastern Cougar riomote Cat

Andean Cat

Pakistan Sand Cat

Marbled Cat Ocelot

Flat-headed Cat Pardel Lynx

Asiatic Golden Cat Rusty-spotted Cat Little Spotted Cat

Clouded Leopard Jaguarundi Margay

Asiatic Lion Jaguar

Snow Leopard Leopard

Algeria, Morocco, Tunisia Southern Africa > E

Africa, Middle East, Iran, [India] [ran, [India]

U.S.S.R. Borneo

U.S.A.

Ryukyu Is (Japan) Canada, U.S.A.

Pakistan Andes

Asia

J.S.A., Central & South America Portugal, Spain

India, Sri Lanka South-east Asia

Asia

Central & South America

Central & South America

U.S.A., Central & South America

Gujarat (India)

U.S.A., Central & South America Africa, Middle East, Asia

Asia

Asia

INNIPEDIA	Otariidae
Order Pl	Family 0

Arctocephalus philippii Arctocephalus townsendi Odobenus rosmarus laptevi Zalophus californianus japonicus

### Family Phocidae

Monachus monachus Monachus schauinslandi Monachus tropicalis Phoca hispida saimensis Phoca vitulina stejnegeri

#### Order PROBOSCIDEA Family Elephantidae

Elephas maximus Loxodonta africana

### Order HYRACOIDEA

Family Procviidae Dendrohyrax validus

#### Order SIRENIA Family Dugongidae

Dugong dugon

Hydrodamalis gigas

## Family Trichechidae

Trichechus inunguis Trichechus manatus

Juan Fernandez Fur Seal Guadalupe Fur Seal Laptev Walrus Japanese Sea Lion Mediterranean Monk Seal Hawaiian Monk Seal Caribbean Monk Seal Saimaa Seal Kurii Seal

Indian Elephant African Elephant .

Eastern Tree Dassie

Dugong

Steller's Sea Cow

Amazonian Manatee West Indian Manatee

V Chile

Mexico, U.S.A.

U.S.S.R.

Ex? Japan, North & South Korea

E Mediterranean & Mauritanian coasts E Hawaii (U.S.A.)

Ex? Caribbean

E Finland

/ Kuril Sea

V Africa

Asia

Tanzania, Pemba I., Zanzibar

M

V Coastal Indian & Western Pacific Oceans

Ex [Bering Sea, North Pacific Ocean]

V Amazon Basin

V Caribbean & South American Coasts & Rivers

	36 .04 . 424		
Trichechus senegalensis	West Airican Manatee	>	West Airica
Order PERISSODACTYLA Family Equidae Equus africanus Equus grevyi Equus hemionus Equus hemionus hemippus Equus hemionus khur Equus przewalskii Equus guagga quagga Equus zebra hartmannae	African Wild Ass Grevy's Zebra Asiatic Wild Ass Syrian Wild Ass Indian Wild Ass Przewalski's Horse True Quagga Hartmann's Mountain Zebra Cape Mountain Zebra	មក > ស្លួ ម ស្លួ > ស ភ្លែ	North-east Africa Ethiopia, Kenya, [Somalia] Asia [Syria] Pakistan, India Mongolia, China [South Africa] Angola, Namibia
Family Tapiridae Tapirus bairdii Tapirus indicus Tapirus pinchaque	Central American Tapir Malayan Tapir Mountain Tapir	> H >	Central & North-west South Americ South-east Asia North-west South America
Family Rhinocerotidae Ceratotherium simum cottoni Diceros bicornis Didermocerus sumatrensis Rhinoceros sondaicus Rhinoceros unicornis	Northern Square-lipped Rhinoceros Black Rhinoceros Sumatran Rhinoceros Javan Rhinoceros Great Indian Rhinoceros	ਜ ਸ ਸ ਸ ਸ	Zaire, S. Sudan Africa South-east Asia Java (Indonesia), Vietnam India, Nepal
Order ARTIODACTYLA Family Suidae Babyrousa babyrussa Sus barbatus cebifrons Sus barbatus oi Sus salvanius	Babirusa Visayan Warty Pig Western Bearded Pig Pygmy Hog	> >> E	Sulawesi, Buru, Sulu & Togian Is (Indonesia) Visayan Is (Philippines) Malaysia, Indonesia [Bangladesh], India, Nepal

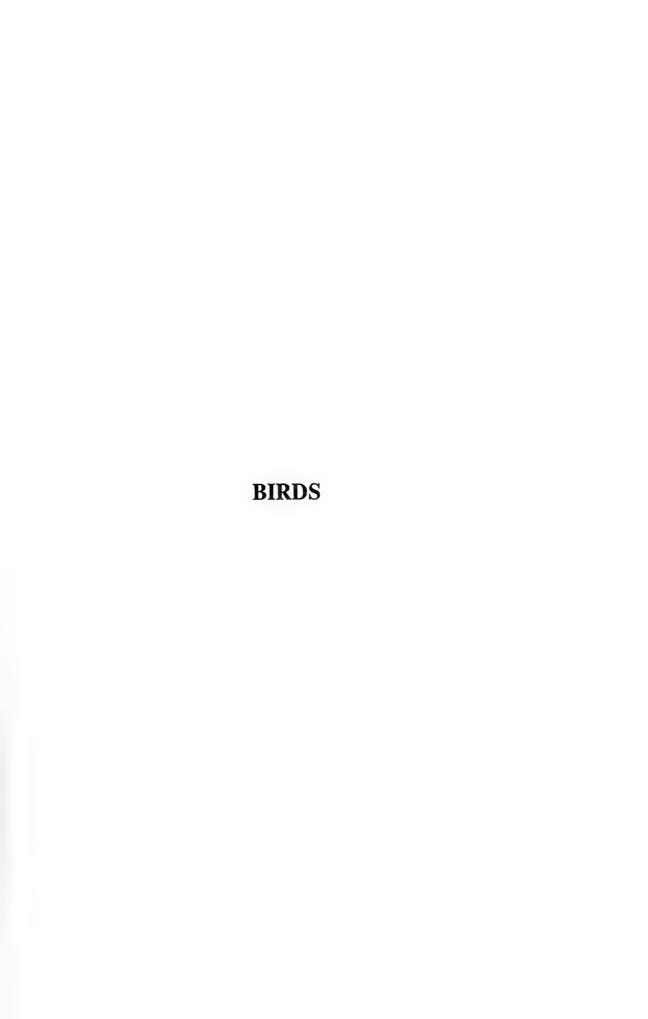
America

Corsica (France)], Sardinia (Italy) Java & Bawean I. (Indonesia) Argentina, Bolivia, Paraguay Calamian I. (Philippines) Visayan Is (Philippines) Sawean I. (Indonesia) Afghanistan, U.S.S.R. Ryukyu Is (Japan) Ryukyu Is (Japan) Central America Mongolia, China Algeria, Tunisia South-east Asia South-east Asia China, Bhutan ndia, Nepal West Africa China China China Andes India India > > Javan and Bawean Warty Pigs Manipur Brow-antlered Deer Thailand Brow-antlered Deer Ryukyu Islands' Wild Pig Pygmy Hippopotamus Visayan Spotted Deer Wild Bactrian Camel Corsican Red Deer Chacoan Peccary Mc'Neill's Deer Thorold's Deer Calamian Deer 3actrian Deer arkand Deer Barbary Deer Swamp Deer Ryukyu Sika Marsh Deer Xuhl's Deer Shansi Sika **l'hamin** Hangul Vicuna Shou Family Hippopotamidae Cervus elaphus yarkandensis Family Tayassuidae Cervus elaphus bactrianus Cervus elaphus corsicanus Cervus nippon grassianus Cervus elaphus macneilli Cervus elaphus barbarus Family Camelidae Cervus elaphus wallichi Blastocerus dichotomus Cervus elaphus hanglu Cervus nippon keramae Sus scrofa riukiuanus Family Cervidae Choeropsis liberiensis Cervus eldi siamensis Camelus bactrianus Catagonus wagneri Axis calamianensis Cervus albirostris Cervus duvauceli Vicugna vicugna Cervus eldi eldi Sus verrucosus Cervus alfredi Cervus eldi Axis kuhli

Cerus nippon menderinus         North China Sika         Ex. China           Cerus nippon menderinus         South China Sika         E. China           Cerus nippon menderinus         Permosan Sichounicus         Permosan Sichounicus           Cerus nippon sichounicus         Permosan Sichounicus         Permosan Fallow Deer         E. China           Cerus nippon sichounicus         Pere David's Deer         E. China         E. China           Hippocanelus oriticus         Pere David's Deer         D. North Andes         D. North Andes           Hippocanelus oriticus         Chinase Water-deer         V. China         Routh Andes           Hydropocanelus oriticus         Black Munipa         P. China         P. China           Munitacus feati         Pere's Munipa         V. China         P. China           Munitacus feati         P. China         P. China         P. China	me minnen mendeminne	North China Sika	EX	China
South China Sika  nicus  nus  nus  Persian Fallow Deer  s  s  Per David's Deer  North Andean Huemul  us  Chinese Water-deer  Black Muntjac  Cetrosensis  Cetorium  Argentinian Pampas Deer  Northern Pudu  E  Buropean Bison  Cadur  Northern Pudu  E  Buropean Bison  Cadur  Wild Asiatic Water Buffalo  E  Mountain Anoa  Tamaraw  Addax  Bak-faced Impala  E  Bak-faced Impala  Bak-faced Impala	s hippon munum mun			
rectors  s Persian Fallow Deer  sists  Pere David's Deer  North Andean Huemul  Chinese Water-deer  Black Muntjac  Cedros Island Mule Deer  Reg's Muntjac  Cedros Island Mule Deer  Reg Deer  Northern Pudu  Progentinian Pampas Deer  I ower California Pronghorn  European Bison  European Bison  Wild Yak  Banteng  Kouprey  Wind Asiatic Water Buffalo  Lowland Anoa  European Biand Anoa  Banteng  Wountain Anoa  Tamaraw  Mountain Anoa  Bake-faced Impala  Bake-faced Impala	s nippon pseudaxis	South China Sika	臼	China
Formosan Sika  Persian Fellow Deer  Porth Andean Huemul  Chinese Water-deer  Black Muntjac  Cedros Island Mule Deer  Rey Deer  Argentinian Pampas Deer  Argentinian Pampas Deer  I over California Pronghorn  European Bison  Guar  Kouprey  Kouprey  Wild Yak  Banteng  Kouprey  Wild Asiatic Water Buffalo  I owland Anoa  Mountain Anoa  Back-faced Impala  Back-faced Impala  Back-faced Impala	s nippon sichvanicus		Н	China
Pere David's Deer  siss  North Andean Huemul  Chinese Water-deer  Black Muntjac  Cedrosensis  Cedros Island Mule Deer  Red's Muntjac  Cedros Island Mule Deer  Red Shuttjac  Cedros Island Mule Deer  Red Deer  Cedros Island Mule Deer  Red Deer  Cedros Island Mule Deer  Red Deer  Argentinian Pampas Deer  I Northern Pudu  Northern Pudu  Sonoran Pronghorn  E Barteng  Kouprey  Kouprey	s nippon taiouanus	Formosan Sika	ខ	Taiwan
Pere David's Deer  sis  North Andean Huemul  South Andean Huemul  Chinese Water-deer  Black Munijac  Cedros Island Mule Deer  Res's Munijac  Cedros Island Mule Deer  Rey Deer  Argentinian Pampas Deer  Rey Deer  Argentinian Pampas Deer  I ower California Pronghorn  Sonoran Pronghorn  E E  Wild Yak  Banteng  Kouprey  Would Asiatic Water Buffalo  Lowland Anoa  Mountain Anoa  Bankefined Inpala  Metersi  Black-fixeed Impala  Back-fixeed Impala	mesopotamica	Persian Fallow Deer	凶	Iran, Iraq, Israel, Syria
North Andean Huemul  us  South Andean Huemul  Chinese Water-deer  Black Muntjac  Fea's Muntjac  Cedros Island Mule Deer  Rey Deer  Argentinian Pampas Deer  Rey Deer  Argentinian Pampas Deer  Northern Pudu  Lower California Pronghorn  E Banteng  Kouprey  Kouprey  Kouprey  Wild Yak  Banteng  Kouprey  Kouprey  Woestern Giant Eland  Wedsax  Addax  Back-faced Impala	urus davidianus	Pere David's Deer	田	China
Chinese Water-deer Black Munipe Chinese Water-deer Black Munipe Fea's Munipe Fea's Munipe Fea's Munipe Cedros Island Mule Deer Fey Cedros Island Mule Deer Rey Deer Argentinian Pampas Deer I Northern Pudu I Northern Pudu Sonoran Pronghorn FE FE Buropean Bison Gaur Wild Yak Banten Wild Asiatic Water Buffalo FE FE Would Asiatic Water Buffalo FE FE Mountain Anoa FE FE Addax Back-faced Impala FE	camelus antisensis	North Andean Huemul	Λ	North Andes
Chinese Water-deer  Black Muntjac  Fea's Muntjac  Cedros Island Mule Deer  Rey Deer  Northern Pudu  Argentinian Pampas Deer  I Northern Pudu  Lower California Pronghorn  Sonoran Pronghorn  European Bison  Gaur  Wild Yak  Banteng  Wild Asiatic Water Buffalo  Lowland Anoa  Mountain Anoa  Tamaraw  Western Giant Eland  Black-faced Impala  Black-faced Impala	scamelus bisculcus	South Andean Huemul	闰	South Andes
Black Muntjac Fea's Muntjac Fea's Muntjac Cedros Island Mule Deer B Cedros Island Mule Deer R Key Deer Argentinian Pampas Deer I Northern Pudu I Northern Buffalo I No	potes inermis	Chinese Water-deer	R	China, Korea
cerrosensis       Fea's Muntjac       E         us clavium       Key Deer       R         s celer       Argentinian Pampas Deer       E         hpridae       I ower California Pronghorn       E         ia peninsularis       Lower California Pronghorn       E         ia sonoriensis       Sonoran Pronghorn       V         Gaur       V       V         Wild Yak       E         Banteng       V         Kouprey       V         Wild Asiatic Water Buffalo       E         Ivonland Anoa       E         Mountain Anoa       E         Is au derbianus       Mestern Giant Eland       E         Is au derbianus       Black-faced Impala       E	iacus crinifrons	Black Muntjac	Λ	China
ionus cerrosensis ritionus clavium Argentinian Pampas Deer Rey Deer Argentinian Pampas Deer Itilocapridae Itilocap	iacus feaei	Fea's Muntjac	田	Burma, Thailand, China
Key Deer Argentinian Pampas Deer Northern Pudu  Lower California Pronghorn  European Bison Gaur Wild Yak Banteng Kouprey Wild Asiatic Water Buffalo Lowland Anoa Mountain Anoa Tamaraw Western Giant Eland Addax Black-faced Impala	oileus hemionus cerrosensis	Cedros Island Mule Deer	ద	Mexico
Argentinian Pampas Deer  Northern Pudu  Lower California Pronghorn  European Bison  Gaur  Wild Yak  Banteng  Kouprey  Wild Asiatic Water Buffalo  Lowland Anoa  Tamaraw  Western Giant Eland  Addax  Black-faced Impala	oileus nirginianus clanium	Key Deer	R	U.S.A.
Lower California Pronghorn  European Bison Gaur Wild Yak Banteng Kouprey Wild Asiatic Water Buffalo Lowland Anoa Mountain Anoa Tamaraw Western Giant Eland E Black-faced Impala	ceros bezoarticus celer	Argentinian Pampas Deer	闰	Argentina
Lower California Pronghorn  Sonoran Pronghorn  European Bison Gaur  Wild Yak Banteng Kouprey Wild Asiatic Water Buffalo Lowland Anoa Mountain Anoa Tamaraw Western Giant Eland Addax Black-faced Impala	mephistopheles	Northern Pudu	I	Andes
Lower California Pronghorn  Sonoran Pronghorn  European Bison  Gaur  Wild Yak  Banteng  Kouprey  Wild Asiatic Water Buffalo  Lowland Anoa  Mountain Anoa  Tamaraw  Western Giant Eland  Addax  Black-faced Impala				
Lower California Pronghorn  Sonoran Pronghorn  European Bison  Gaur  Wild Yak  Banteng  Kouprey  Wild Asiatic Water Buffalo  Lowland Anoa  Mountain Anoa  Tamaraw  Western Giant Eland  Addax  Black-faced Impala	amily Antilocapridae			
Sonoran Pronghorn  European Bison Gaur Wild Yak Banteng Kouprey Kouprey Wild Asiatic Water Buffalo Lowland Anoa Mountain Anoa Tamaraw Western Giant Eland Addax Black-faced Impala	ocapra americana peninsularis	Lower California Pronghorn	臼	Mexico
European Bison Gaur Gaur Wild Yak Banteng Kouprey Kouprey Wild Asiatic Water Buffalo Esi Nountain Anoa Tamaraw Western Giant Eland Addax Black-faced Impala European Bison V V E E E E E E E E E E E E E E E E E	ocapra americana sonoriensis	Sonoran Pronghorn	Щ	Mexico & U.S.A.
European Bison Gaur Wild Yak Banteng Kouprey K	amily Bovidae			
Gaur  Wild Yak  Banteng  Kouprey  Tamaraw  Mountain Anoa  Tamaraw  Tamaraw  Western Giant Eland  Addax  Black-faced Impala	bonasus	European Bison	^	Poland, U.S.S.R.
Wild Yak Banteng Banteng Kouprey Kouprey Kouprey E Wild Asiatic Water Buffalo E Szicornis Szicornis Mountain Anoa Tamaraw F Tamaraw Western Giant Eland Addax Black-faced Impala E  Banteng	aurus	Gaur	^	South-east Asia
is       Kouprey       E         ssicornis       Wild Asiatic Water Buffalo       E         ssicornis       Lowland Anoa       E         sesi       Mountain Anoa       E         rensis       Tamaraw       E         erbianus derbianus       Western Giant Eland       E         Addax       Addax       E         mpus petersi       Black-faced Impala       E	runniens	Wild Yak	闰	Central Asia
Kouprey Wild Asiatic Water Buffalo  Uowland Anoa  Mountain Anoa  Tamaraw  derbianus  Western Giant Eland  Addax  Black-faced Impala	avanicus	Banteng	^	South-east Asia
Wild Asiatic Water Buffalo E Lowland Anoa Mountain Anoa Tamaraw  derbianus Western Giant Eland Addax E Black-faced Impala	auveli	Kouprey	闰	Indochina
Lowland Anoa  Lowland Anoa  Mountain Anoa  Tamaraw  derbianus  Western Giant Eland  Addax  E  Black-faced Impala	lus bubalis	Wild Asiatic Water Buffalo	臼	India, Nepal
Mountain Anoa  Tamaraw  derbianus  Western Giant Eland  Addax  E  Black-faced Impala	lus depressicornis	Lowland Anoa	ម	Sulawesi (Indonesia)
nsis Tamaraw E : idanus derbianus Addax Addax E : Black-faced Impala E : E : E : E : E : E : E : E : E : E :	lus auarlesi	Mountain Anoa	团	Sulawesi (Indonesia)
s derbianus Western Giant Eland E   Addax	lus mindorensis	Tamaraw	ম	Philippines
Addax E Black-faced Impala E	otragus derbianus derbianus	Western Giant Eland	田	West Africa
etersi Black-faced Impala E	x nasomaculatus	Addax	闰	Sahara/Sahel
	ceros melampus petersi	Black-faced Impala	떠	Angola, Namibia

Cote d'Ivoire, Liberia, Sierra Leone Cote d'Ivoire, Liberia, Sierra Leone Sahara/Sahel & Middle East Kenya, Tanzania, Zanzibar Djibouti, Ethiopia, Somalia Egypt, Ethiopia, Sudan Nest & Central Africa North-eastern Africa Arabia, Middle East Senegal to Eritrea North-west Africa Sthiopia, Somalia Ethiopia, Somalia Sthiopia, Somalia Southern Africa Kenya, Somalia South Africa] Sahara/Sahel Sahara/Sahel South Africa South Africa West Africa **Tanzania** Nigeria Jganda Arabia Angola Gabon Ruwenzori Black-fronted Duiker Slender-horned Gazelle Soemmerrings Gazelle Arabian Sand Gazelle Giant Sable Antelope Swayne's Hartebeest Western Klipspringer Red-fronted Gazelle White-legged Duiker Hunter's Antelope Mountain Gazelle Jentink's Duiker Speke's Gazelle Cuvier's Gazelle **Pora Hartebeest** Ogilby's Duiker Abbott's Duiker Beira Antelope **Dorcas Gazelle** Dama Gazelle Ader's Duiker Zebra Duiker Bontebok Korrigum 3luebuck Bontebok Dibatag Lechwe Oreotragus oreotragus porteousi Cephalophus nigrifrons rubidus Alcelaphus buselaphus swaynei Cephalophus ogilbyi crusalbum Damaliscus lunatus korrigum Gazella subgutturosa marica Alcelaphus buselaphus tora Damaliscus dorcas dorcas Hippotragus niger variani Hippotragus leucophaeus Dorcatragus megalotis Gazella soemmerringi Cephalophus jentinki Cephalophus ogilbyi Cephalophus spadix Ammodorcas clarkei Cephalophus adersi Damaliscus hunteri Damaliscus dorcas Cephalophus zebra Gazella leptoceros Gazella rufifrons Gazella gazella Gazella cuvieri Gazella dorcas Gazella spekei Gazella dama Kobus leche

Malaysia, Sumatra (Indonesia) Zzechoslovakia, Poland Afghanistan, Pakistan China, Burma, India Arabia, Middle East Cameroon, Nigeria Sardinia, Corsica West Himalayas Central Africa Sahara/Sahel Sahara/Sahel Ethiopia Ethiopia Taiwan Cyprus France China Oman Spain China India Italy Western Mountain Reedbuck Straight-horned Markhor Scimitar-horned Oryx Eastern Giant Eland Chartreuse Chamois Sardinian Mouflon Abruzzo Chamois Sumatran Serow Szechwan Takin Mountain Nyala Cyprus Mouflon Formosa Serow **Patra Chamois** Barbary Sheep yrenean Ibex Arabian Oryx Golden Takin Arabian Tahr Nilgiri Tahr Walia Ibex Red Goral Markhor Capricornis sumatraensis sumatraensis Rupicapra rupicapra cartusiana Redunca fulvorufula adamauae Tragelaphus derbianus gigas Capricornis crispus swinhoei Rupicapra pyrenaica ornata Rupicapra rupicapra tatrica Budorcas taxicolor bedfordi Budorcas taxicolor tibetana Zapra pyrenaica pyrenaica Capra falconeri megaceros Ovis orientalis musimon Ovis orientalis ophion Hemitragus hylocrius Nemorhaedus baileyi Hemitragus jayakari Fragelaphus buxtoni Ammotragus lervia Capra falconeri Oryx dammah Oryx leucoryx Zapra walie



#### Class AVES

#### Order APTERYGIFORMES Family Apterygidae

Apteryx owenii

#### Order TINAMIFORMES Family Tinamidae

Tinamus solitarius Tinamus osgoodi Crypturellus saltuarius Crypturellus noctivagus

Nothoprocta kalinowskii Nothura minor Taoniscus nanus

Nothoprocta taczanowskii

# Order SPHENISCIFORMES

Family Spheniscidae Megadyptes antipodes Spheniscus demersus Spheniscus humboldti

# Order PODICIPEDIFORMES

Family Podicipedidae
Tachybaptus pelzelni
Tachybaptus rufolavatus
Podilymbus gigas
Podiceps andinus
Podiceps taczanowskii
Podiceps gallardoi

Little Spotted Kiwi

V New Zealand

Argentina, Brazil, Paraguay

Colombia, Peru

Colombia

Brazil

Peru Peru

Solitary Tinamou
Black Tinamou
Magdalena Tinamou
Yellow-legged Tinamou
Taczanowski's Tinamou
Kalinowski's Tinamou
Lesser Nothura

Yellow-eyed Penguin Jackass Penguin Peruvian Penguin

Namibia, South Africa

Chile, Peru

New Zealand

Argentina, Brazil

Brazil

Madagascar Grebe Alaotra Grebe Atitlan Grebe Colombian Grebe Junin Grebe

Hooded Grebe

K Madagascar
E Madagascar
Ex [Guatemala]
Ex [Colombia]

E Peru R Argentina

### Order PROCELLARIIFORMES Family Diomedeidae

Diomedea amsterdamensis Diomedea albatrus

# Family Procellariidae

Pterodroma phaeopygia Pterodroma magentae Pterodroma aterrima Pterodroma madeira Pterodroma hasitata Pterodroma cahow Pterodroma becki Pterodroma feae

<sup>2</sup>terodroma macgillivrayi terodroma defilippiana Procellaria westlandica Procellaria parkinsoni Pterodroma axillaris Puffinus auricularis Pterodroma pycrofti Puffinus creatopus Puffinus heinrothi Pterodroma cookii Puffinus newelli

## Family Hydrobatidae

Oceanodroma macrodactyla Oceanodroma markhami Oceanodroma tristrami

Short-tailed Albatross Amsterdam Albatross

Mascarene Black Petrel **Black-capped Petrel** Cahow

Magenta Petrel 3eck's Petrel Gon-gon Freira

Dark-rumped Petrel

Chatham Island Petrel Defilippe's Petrel Westland Petrel Pycroft's Petrel Cook's Petrel Black Petrel Fiji Petrel

Pink-footed Shearwater Townsend's Shearwater Heinroth's Shearwater Newell's Shearwater

Markham's Storm-petrel Guadalupe Storm-petrel Tristram's Storm-petrel

Amsterdam I. (France) 田瓦

Japan

Cuba, Dominican Rep., Haiti Mauritius

Papua New Guinea, Solomon Is Bermuda

Cape Verde Is. Madeira (Portugal) Chatham Is (New Zealand)

Galapagos (Ecuador), Hawaiian Is Madeira (Portugal) (U.S.A.)

Chatham Is (New Zealand) New Zealand Chile

New Zealand New Zealand

New Zealand

Juan Fernandez Is (Chile)

New Britain (Papua New Guinea) Hawaiian Is (U.S.A.)

Mexico

[Mexico]

Eastern Pacific Ocean

Hawaiian Is (U.S.A.), Japan

Ringed Storm-petrel K* Chile, Ecuador, Peru	ue Peruvian Diving Petrel K* Chile, Peru	Dalmatian Pelican Spot-billed Pelican	Abbott's Booby E Christmas I. (Australia)	Rough-faced Shag Rygmy Cormorant R* Western Palaearctic Galapagos Flightless Cormorant R Galapagos (Ecuador)	Ascension Frigatebird  R. Ascension I. (U.K.) Christmas Frigatebird  E. Christmas I. (Australia)	Japanese Night-heron	White-eared Night-heron E China Sloty Remot	tet = T
Oceanodroma hornbyi	Family Pelecanoididae Pelecanoides garnotii	Order PELECANIFORMES Family Pelecanidae Pelecanus crispus Pelecanus philippensis	Family Sulidae Sula abbotti	Family Phalacrocoracidae Phalacrocorax carunculatus Phalacrocorax pygmeus Nannopterum harrisi	Family Fregatidae Fregata aquila Fregata andrewsi	Order CICONIIFORMES Family Ardeidae Gorsachius goisagi	Gorsachius magnificus Egretta vinaceigula	Egretta eulophotes

Family Balaenicipitidae alaeniceps rex	Shoebill	<b>*</b>	Central and East Africa
Family Ciconiidae ycteria cinerea iconia stormi iconia boyciana eptoptilos javanicus eptoptilos dubius	Milky Stork Storm's Stork Oriental White Stork Lesser Adjutant Greater Adjutant	N H H N	SE Asia Thailand, Brunei, Indonesia, Malaysia China, Japan, South Korea, U.S.S.R. S & SE Asia India & SE Asia
Family Threskiornithidae seudibis davisoni	White-shouldered Ibis	>	Burma, Cambodia, Laos, Thailand, Vietnam Indonesia
seudibis gigantea eronticus eremita eronticus calvus ipponia nippon	Giant Ibis Northern Bald Ibis Southern Bald Ibis Crested Ibis	ជ ១ ជ ជ ១ ,	Cambodia, Laos, Thailand, Vietnam Turkey, North Yemen, Morocco Lesotho, South Africa, Swaziland China, Japan
ostrychia bocagei Iatalea minor	Dwarf Olive Ibis Black-faced Spoonbill	<b>⊣</b> ¤	Sao Tome China, N. Korea
Family Phoenicopteridae hoenicoparrus andinus hoenicoparrus jamesi	Andean Flamingo Puna Flamingo	K* *	Argentina, Bolivia, Chile, Peru Argentina, Bolivia, Chile, Peru
Order ANSERIFORMES Family Anhimidae hauna chavaria	Northern Screamer	K*	Colombia, Venezuela
Family Anatidae endrocygna arborea	West Indian Whistling Duck	æ	Caribbean Islands

Geronticus calvus

Nipponia nippon Bostrychia bocagei

Platalea minor

Pseudibis gigantea Geronticus eremita

Pseudibis davisoni

Balaeniceps rex

Mycteria cinerea

Ciconia stormi

Ciconia boyciana Leptoptilos javanicus Leptoptilos dubius

Phoenicoparrus andinus

Phoenicoparrus jamesi

Chauna chavaria

Dendrocygna arborea

Bangladesh, Burma, India, Indonesia, U.S.S.R., China, Japan, N. Korea, S. U.S.S.R., China, Japan, N. Korea, S. Irian Jaya (Indonesia), Papua New India, Nepal, Bangladesh, Burma] Argentina, Brazil, Paraguay U.S.S.R., China, N. Korea China, N. Korea, U.S.S.R. Thailand, Laos, Vietnam Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Western Palaearctic U.S.S.R., S. Korea Korea, Taiwan New Zealand Madagascar Madagascar Palaearctic Palaearctic Palaearctic Palaearctic Australia Guinea U.S.A. Korea Brazil \* 囟 Lesser White-fronted Goose Scaly-sided Merganser Black Honey Buzzard Madagascar Pochard Brazilian Merganser Red-breasted Goose White-headed Duck White-collared Kite White-winged Duck Pink-headed Duck California Condor Crested Shelduck Madagascar Teal Hawaiian Goose Mandarin Duck Baer's Pochard Freckled Duck Hawaiian Duck Marbled Teal Laysan Duck Baykal Teal Brown Teal Red Kite Order FALCONIFORMES Marmaronetta angustirostris Rhodonessa caryophyllacea Family Accipitridae Family Cathartidae Gymnogyps californianus Henicopernis infuscatus Oxyura leucocephala Branta sandvicensis Mergus octosetaceus Mergus squamatus Stictonetta naevosa Anas aucklandica Cairina scutulata Anas laysanensis Anser erythropus Branta ruficollis Tadorna cristata Leptodon forbesi Anas wyvilliana Aythya innotata Aix galericulata Milvus milvus Anas formosa Anas bernieri Aythya baeri

<ul> <li>R Solomon Is.</li> <li>E Madagascar</li> <li>R S &amp; E Asia</li> <li>R Palaearctic</li> <li>R U.S.S.R., Japan, N. Korea, S. Korea</li> <li>R Southern Africa</li> <li>V Palaearctic</li> </ul>	4- 4-	* * * * * * * *	V Dominican Rep., Haiti R Galapagos (Ecuador) R Hawaiian Is (U.S.A.) K* Argentina, Chile R South and Central America R South and Central America V Irian Jaya (Indonesia), Papua New Guinea
Solomons Sea Eagle Madagascar Fish-eagle Pallas's Fish-eagle White-tailed Eagle Steller's Sea Eagle Cape Vulture Cinereous Vulture	Dark Serpent-eagle Kinabalu Serpent-eagle Madagascar Serpent-eagle Red Goshawk Small Sparrowhawk New Britain Sparrowhawk Imitator Sparrowhawk Semi-collared Hawk	Gundlach's Hawk Grey-bellied Hawk Plumbeous Hawk White-necked Hawk Grey-backed Hawk Mantled Hawk Solitary Eagle Crowned Eagle	Ridgway's Hawk Galapagos Hawk Hawaiian Hawk Rufous-tailed Hawk Crested Eagle Harpy Eagle New Guinea Eagle

Spilornis kinabaluensis

Accipiter brachyurus

Accipiter imitator

Accipiter collaris

Accipiter radiatus

Accipiter nanus

Eutriorchis astur

Haliaeetus vociferoides Haliaeetus leucoryphus

Haliaeetus sanfordi

Haliaeetus pelagicus

Aegypius monachus

Spilornis elgini

Gyps coprotheres

Haliaeetus albicilla

Harpyhaliaetus coronatus

Harpyhaliaetus solitarius

Leucopternis polionota

Leucopternis lacernulata Leucopternis occidentalis

Leucopternis plumbea

Accipiter poliogaster

Accipiter gundlachi

Harpyopsis novaeguineae

Morphnus guianensis

Harpia harpyja

Buteo galapagoensis

Buteo ridgwayi

Buteo solitarius Buteo ventralis

Burma, Thailand, Brunei, Indonesia, Bariggai & Sula Is (Indonesia) Palau, N. Mariana Is (U.S.A.) South and Central America Brazil, Colombia, Ecuador Molluccas (Indonesia) Sulawesi (Indonesia) Waigeo (Indonesia) Argentina, Bolivia Nicobar Is (India) Portugal, Spain Ecuador, Peru Ecuador, Peru Ecuador, Peru Palaearctic Philippines Palaearctic Mauritius Australia Colombia Australia Malaysia Tonga Peru Java \* \* Rufous-headed Chachalaca Plumbeous Forest-falcon Orange-breasted Falcon Spanish Imperial Eagle Micronesian Scrubfowl Traylor's Forest-falcon Polynesian Scrubfowl Waigeo Brush-turkey Wallaces Hawk-eagle Moluccan Scrubfowl White-winged Guan Nicobar Scrubfowl Javan Hawk-eagle Mauritius Kestrel Red-faced Guan Philippine Eagle Sula Scrubfowl mperial Eagle Lesser Kestrel Bearded Guan Grey Falcon Malleefowl Maleo Order GALLIFORMES Family Megapodiidae Megapodius nicobariensis Family Falconidae Megapodius pritchardii Megapodius bernsteinii Megapodius laperouse Family Cracidae Macrocephalon maleo Megapodius wallacei Pithecophaga jefferyi Micrastur plumbeus Aepypodius bruijnii Penelope albipennis Ortalis erythroptera Micrastur buckleyi Penelope dabbenei

Cauca Guan

Penelope perspicax

Penelope barbata

Leipoa ocellata

Falco deiroleucus

Falco punctatus

Falco naumanni

Falco hypoleucos

Spizaetus bartelsi

Spizaetus nanus

Aquila adalbertii

Aquila heliaca

Penelope jacucaca Penelope ochrogaster Pipile jacutinga Penelopina nigra

Oreophasis derbianus Mitu mitu Pauxi pauxi Pauxi unicornis Crax alberti Crax globulosa

Crax blumenbachii

# Family Phasianidae

Odontophorus hyperythrus Francolinus camerunensis Odontophorus strophium Arborophila cambodiana Francolinus ochropectus Perdicula manipurensis Arborophila charltonii Arborophila rufipectus Francolinus swierstrai etrao mlokosiewiczi Arborophila gingica Francolinus gularis Arborophila ardens Dendrortyx barbatus Agriocharis ocellata Francolinus nahani Arborophila davidi

White-browed Guan Chestnut-bellied Guan Black-fronted Piping Guan Highland Guan

Horned Guan Alagoas Curassow Northern Helmeted Curassow Southern Helmeted Curassow Blue-billed Curassow Wattled Curassow

Red-billed Curassow

Ocellated Turkey
Caucasian Black Grouse
Bearded Wood Partridge
Chestnut Wood-quail
Gorgeted Wood-quail

Mount Cameroon Francolin Swierstra's Francolin Nahan's Francolin Swamp Francolin Manipur Bush Quail Sichuan Partridge

White-necklaced Partridge Orange-necked Partridge Chestnut-headed Partridge White-eared Partridge

Chestnut-necklaced Partridge

K\* Brazil

K\* Brazil E Argentina, Brazil, Paraguay \* El Salvador, Guatemala, Honduras, Mexico, Nicaragua Guatemala, Mexico

Brazil

Colombia, Venezuela

K\* Colombia, VenezueisK\* Bolivia, PeruV Colombia

K\* Bolivia, Brazil, Colombia, Ecuador, Peru

Bahia, Espirito Santo (Brazil)

\* Belize, Guatemala, Mexico

X\* Turkey, U.S.S.R., IranX\* MexicoX\* Colombia

E Colombia

E Djibouti

R Cameroon

I Angola R Uganda, Zaire

K Uganda, Laire
 V Bangladesh, India, Nepal

V Bangladesh, India, R Bangladesh, India

E China

R China I Vietnam

Cambodia, Thailand

E China

R Thailand, Indonesia, Malaysia

Ex [India] V India, Pakistan I Bhutan, Burma, China, India R China I China, Burma, India R China	R Laos, Vietnam I Vietnam I Vietnam V Taiwan V Sumatra (Indonesia) V Burma, Thailand, Brunei, Indonesia,	Malaysia R Cambodia, Laos, Thailand, Vietnam R Kalimantan (Indonesia), Sabah & Sarawak (Malaysia), Brunei V Hubei, Shanxi (China)	V India, Nepal, Pakistan V China R Burma, China, India R Taiwan R China	R Vietnam R Burma, Thailand, Malaysia R Palawan (Philippines) R Laos, Malaysia, Vietnam V SE Asia K* Zaire E West Africa
Himalayan Quail Western Tragopan Blyth's Tragopan Cabot's Tragopan Sclater's Monal Chinese Monal	Imperial Pheasant Vietnam Pheasant Edwards' Pheasant Swinhoe's Pheasant Salvadori's Pheasant Crested Fireback	Siamese Fireback Bulwer's Pheasant Brown Eared Pheasant	Cheer Pheasant Elliot's Pheasant Hume's Pheasant Mikado Pheasant Reeves' Pheasant Lady Amberst's Pheasant	Germain's Peacock-pheasant Malaysian Peacock-pheasant Palawan Peacock-pheasant Crested Argus Green Peafowl Congo Peacock White-breasted Guineafowl
Ophrysia superciliosa Tragopan melanocephalus Tragopan blythii Tragopan caboti Lophophorus sclateri	Lophura imperialis Lophura hatinhensis Lophura edwardsi Lophura swinhoii Lophura inornata Lophura ignita	Lophura diardi Lophura bulweri Crossoptilon mantchuricum	Catreus wallichi Syrmaticus ellioti Syrmaticus humiae Syrmaticus mikado Syrmaticus reevesii	Polyplectron germaini Polyplectron malacense Polyplectron emphanum Rheinardia ocellata Pavo muticus Afropavo congensis

Madagascar Madagascar Madagascar	Sumba (Indonesia) Luzon (Philippines) * Australia	* Australia	Bhutan, Burma, China, India, Vietnam China, Japan, North Korea, South Korea, 1188	China, Japan, North Korea, South Korea, 1188 R.	Canada, U.S.A. China, Japan, North Korea, South	Afghanistan, China, India, Iran, II.S.S.R., Pakistan		Ethiopia, Southern Africa
24 24 24	* * * * * * * * * * * * * * * * * * *	**	<b>24</b> 24	>	田民	24	K*	I
White-breasted Mesite Brown Mesite Subdesert Monias	Sumba Buttonquail Worcester's Buttonquail Black-breasted Buttonquail Buff-breasted Buttonquail	Plains-wanderer	Black-necked Crane Hooded Crane	Japanese Crane	Whooping Crane White-naped Crane	Siberian Crane	Wattled Crane	White-winged Fluffail
Order GRUIFORMES Family Mesitornithidae Mesitornis variegata Mesitornis unicolor Monias benschi	Family Turnicidae Turnix everetti Turnix worcesteri Turnix melanogaster Turnix olivii	Family Pedionomidae Pedionomus torquatus	Family Gruidae Grus nigricollis Grus monacha	Grus japonensis	Grus americana Grus vipio	Grus leucogeranus	Bugeranus carunculatus	Family Rallidae Sarothrura ayresi

Papua New Guinea, Solomon Is] J.S.S.R., China, Japan, S. Korea San Cristobal (Solomon Is) Argentina, Bolivia, Chile Lord Howe I. (Australia) New Caledonia (France) Halmahera (Indonesia) naccessible I. (U.K.) Sulawesi (Indonesia) Sulawesi (Indonesia) Argentina, Uruguav Henderson I. (U.K.) uzon (Philippines) Africa, Palaearctic Argentina, Chile Brazil, Paraguay Gough I. (U.K.) Juam (U.S.A.) New Zealand Madagascar Madagascar /enezuela Venezuela Colombia SE Asia Japan Cuba Peru > Horqueta or Rufous-faced Crake San Cristobal Mountain Rail **Henderson Island Rail** Slender-billed Flufftail New Caledonian Rail Rusty-flanked Crake **Brown-banded Rail Jot-winged Crake** Plain-flanked Rail Sough Moorhen naccessible Rail Bar-winged Rail Woodford's Rail ord Howe Rail Masked Finfoot Siberian Crake Sald-faced Rail Horned Coot Okinawa Rail Sakalava Rail nvisible Rail Snoring Rail Austral Rail 3ogota Rail Zapata Rail Guam Rail Corncrake Junin Rail **Pakahe** 

#### Family Heliornithidae Heliopais personata

Pareudiastes silvestris

Gallinula comeri

Fulica cornuta

Cyanolimnas cerverai

Habroptila wallacii

Notornis mantelli

Oryolimnas mirificus

Atlantisia rogersi

Rallus wetmorei

Aramidopsis plateni

Crex crex

Symnocrex rosenbergii

Amaurornis olivieri

Porzana spiloptera

Porzana atra

Rallus semiplumbeus

Rallus antarcticus

Nesoclopeus poecilopterus

Coturnicops exquisitus

Laterallus tuerosi

Sarothrura watersi

Laterallus xenopterus

Laterallus levraudi

Nesoclopeus woodfordi

Gallirallus okinawae

Gallirallus owstoni

Gallirallus lafresnayanus

Gallirallus sylvestris

E New Caledonia (France)	R Paalearctic R Palaearctic R India V Palaearctic E India, Cambodia, Nepal, Vietnam E India, Nepal, Pakistan	Ex [Canary Is (Spain)] E Chatham Is (New Zealand)	E New Zealand	I India	<ul> <li>Ex [Java (Indonesia)]</li> <li>R U.S.S.R.</li> <li>K* Canada, U.S.A.</li> <li>R Madagascar</li> <li>R St. Helena (U.K.)</li> <li>K* Australia</li> <li>E Chatham Is (New Zealand)</li> </ul>
Kagu	Little Bustard Great Bustard Great Indian Bustard Houbara Bustard Bengal Florican Lesser Florican	Canarian Black Oystercatcher Chatham Island Oystercatcher	Black Stilt	Jerdon's Courser	Javan Wattled Lapwing Sociable Lapwing Piping Plover Madagascar Plover St. Helena Plover Hooded Plover Shore Plover
Family Rhynochetidae Rhynochetos jubatus	Family Otididae Tetrax tetrax Otis tarda Ardeotis nigriceps Chlamydotis undulata Houbaropsis bengalensis Sypheotides indica	Order CHARADRIIFORMES Family Haematopodidae Haematopus meadewaldoi Haematopus chathamensis	Family Recurvirostridae Himantopus novaezelandiae	Family Glareolidae Rhinoptilus bitorquatus	Family Charadriidae Vanellus macropterus Vanellus gregarius Charadrius melodus Charadrius thoracicus Charadrius sanctaehelenae Charadrius rubricollis Thinornis novaeseelandiae

E Canada, U.S.A. R Alaska (U.S.A.), Pacific Ocean K* Palaearctic I SE Asia V Tuamotu Archipelago (France) I Sulawesi (Indonesia) I Obi (Indonesia) R New Zealand I S & SE Asia R Asia R* Australia I U.S.S.R., S.E. Asia	<ul> <li>K* Red Sea</li> <li>K* Argentina, Brazil, Uruguay</li> <li>R China, Mongolia, U.S.S.R.</li> <li>R China, Hong Kong, Japan, South</li> <li>Korea, Taiwan</li> <li>V Prince Edward I. (South Africa),</li> <li>Crozet &amp; Kerguelen Is (France)</li> <li>V New Zealand</li> <li>R South Africa, Namibia</li> <li>I China</li> </ul>	V Japan, N. Korea, S. Korea, U.S.S.R.
Eskimo Curlew Bristle-thighed Curlew Slender-billed Curlew Nordmann's Greenshank Tuamotu Sandpiper Sulawesi Woodcock Obi Woodcock Sub-antarctic Snipe Wood Snipe Asian Dowitcher Cox's Sandpiper Spoon-billed Sandpiper	White-eyed Gull Olrog's Gull Audouin's Gull Relict Gull Saunders' Gull Kerguelen Tern Black-fronted Tern Damara Tern Chinese Crested Tern	Japanese Murrelet
Family Scolopacidae Numenius borealis Numenius tahitiensis Numenius tenuirostris Tringa guttifer Prosobonia cancellatus Scolopax celebensis Scolopax rochussenii Coenocorypha aucklandica Gallinago nemoricola Limnodromus semipalmatus Calidris paramelanotos Eurynorhynchus pygmeus	Family Laridae Larus leucophthalmus Larus atlanticus Larus relictus Larus saundersi Sterna virgata Sterna albostriata Sterna balaenarum Sterna bernsteini	Family Alcidae Synthliboramphus wumizusume

### Order COLUMBIFORMES Family Columbidae

Columba oliviae
Columba trocaz
Columba bollii
Columba junoniae
Columba thomensis
Columba elphinstonii
Columba torringtoni
Columba punicea

Columba argentina Columba pallidiceps Columba caribaea
Nesoenas mayeri
Zenaida graysoni
Columbina cyanopis
Claravis godefrida
Leptotila wellsi
Leptotila converi
Geotrygon caniceps
Geotrygon mystacea
Starnoenas cyanocephala
Caloenas nicobarica

Gallicolumba platenae Gallicolumba keayi Gallicolumba menagei Gallicolumba erythroptera

Somali Pigeon
Madeira Laurel Pigeon
Dark-tailed Laurel Pigeon
White-tailed Laurel Pigeon
Maroon Wood-pigeon
Nilgiri Wood-pigeon
Sri Lanka Wood-pigeon
Pale-capped Pigeon

Somalia

Grey Wood-pigeon Yellow-legged Pigeon Ring-tailed Pigeon
Pink Pigeon
Socorro Dove
Blue-eyed Ground Dove
Grenada Dove
Grenada Dove
Tolima Dove
Grey-headed Quail-dove

Blue-headed Quail-dove
Nicobar Pigeon
Mindoro Bleeding-heart
Negros Bleeding-heart
Sulu Bleeding-heart
Polynesian Ground Dove

Bridled Quail-dove

Bismarck Arch. (Papua New Guinea), China, Bangladesh, Burma, India, ndonesia, Burong Is (Malaysia) Argentina, Brazil, Paraguay Cuba, Dominican Republic Lesser Antilles, Virgin Is. Madeira (Portugal) Canary Is (Spain) Canary Is (Spain) Ecuador, Peru Solomon Is Sao Tome Sri Lanka Mauritius Colombia **Fhailand** Grenada Jamaica Mexico Brazil India Cuba

R Cuba
R S.E. Asia, Indonesia, Papua New
Guinea, Palau (F.S.M.)
I Mindoro (Philippines)
I Negros (Philippines)
I Tawi Tawi (Philippines)
E Society Is, Tuamotu Archipelago (France)

R Vanuatu, Solomon Is.  I Solomon Is.  R Marquesas (France)  I Wetar & Timor (Indonesia)  Ex [Choiseul (Solomon Is)]  R Irian Jaya (Indonesia)  R Irian Jaya (Indonesia)  Chimea	R Irian Jaya (Indonesia), Papua New Guinea V Western Samoa V Sumba (Indonesia) V Timor, Roti & Seman (Indonesia) V Burma, Thailand, Brunei, Indonesia,	R Sumba (Indonesia) R Guam, N. Mariana Is. (U.S.A.) E Austral Is (France) Ex [Marquesas Is (France)] I Obi (Indonesia) I Negros (Philippines) R New Caledonia (France) R Mindoro (Philippines) R Society Is, Tuamotu Arch. (France) V Marquesas Is (France) R Christmas I. (Australia) R Indonesia, Malaysia, Philippines V New Caledonia (France)	R Irian Jaya (Indonesia)
Santa Cruz Ground Dove Thick-billed Ground Dove Marquesas Ground Dove Wetar Ground Dove Choiseul Pigeon Western Crowned Pigeon Southern Crowned Pigeon	Victoria Crowned Pigeon  Tooth-billed Pigeon Sumba Green-pigeon Timor Green-pigeon Large Green-pigeon	Red-naped Fruit-dove Mariana Fruit-dove Rapa Fruit-dove Marquesas Fruit-dove Carunculated Fruit-dove Negros Fruit-dove Cloven-feathered Dove Mindoro Imperial-pigeon Polynesian Imperial-pigeon Marquesas Imperial-pigeon Christmas Imperial-pigeon Grey Imperial-pigeon Giant Imperial-pigeon	Black-winged Lory
Gallicolumba sanctaecrucis Gallicolumba salamonis Gallicolumba rubescens Gallicolumba hoedtii Microgoura meeki Goura cristata Goura scheepmakeri	Goura victoria Didunculus strigirostris Treron teysmannii Treron psittacea	Ptilinopus dohertyi Ptilinopus roseicapilla Ptilinopus huttoni Ptilinopus mercierii Ptilinopus granulifrons Ptilinopus arcanus Drepanoptila holosericea Ducula mindorensis Ducula galeata Ducula whartoni Ducula goliath	Order PSITTACIFORMES Family Loriidae Eos cyanogenia

R Tanimbar Is (Indonesia) R Talaud & Sangihe (Indonesia) R Ambon & Seram (Indonesia) R Fr. Polynesia, Kiribati, Tubuai Is. R Henderson I., Pitcairn V Society Is, Tuamotu Archipelago	V Marquesas Is (France) I Buru (Indonesia) I New Caledonia (France)	V Indonesia E Seram, Ambon, Haruku, Saparua	E Moluccas (Indonesia) E Philippines E Tanimbar Is (Indonesia)	R Irian Java (Indonesia) R Luzon & Marinduque (Philippines) I Buru (Indonesia) K* Australia	, , , , , , , , , , , , , , , , , , , ,
Blue-streaked Lory Red-and-blue Lory Purple-naped Lory Kuhl's Lorikeet Stephen's Lorikeet Blue Lorikeet	Ultramarine Lorikeet Blue-fronted Lorikeet New Caledonian Lorikeet	Yellow-crested Cockatoo Salmon-crested Cockatoo	White Cockatoo Red-vented Cockatoo Tanimbar Corella	Salvadori's Fig-parrot Green Racquet-tail Buru Racquet-tail Princess Parrot	Golden-shouldered Parrot Hooded Parrot Paradise Parrot Antipodes Parakeet Orange-bellied Parrot Scarlet-chested Parrot Ground Parrot
Eos reticulata Eos histrio Lorius domicella Vini kuhlii Vini stepheni Vini peruviana	Vini ultramarina Charmosyna toxopei Charmosyna diadema	Family Cacatuidae Cacatua sulphurea Cacatua moluccensis	Cacatua alba Cacatua haematuropygia Cacatua goffini	Family Psittacidae Psittaculirostris salvadorii Prioniturus luconensis Prioniturus mada Polytelis alexandrae	Psephotus chrysopterygius Psephotus dissimilis Psephotus pulcherrimus Cyanoramphus unicolor Neophema chrysogaster Neophema splendida Pezoporus wallicus Geopsittacus occidentalis

Argentina, Brazil, Paraguay, Colombia, Ecuador, Peru Revillagigedo Is (Mexico) Bolivia, Brazil, Paraguay Sangihe (Indonesia) Colombia, Ecuador Colombia, Ecuador Mexico and U.S.A. Nicobar Is (India) Scuador, Peru Scuador, Peru Bahia (Brazil) Mauritius [ruguay] Colombia Colombia Ecuador Ecuador Mexico Bolivia Bolivia Brazil Brazil Brazil Brazil Brazil Brazil Brazil Brazil Cuba **Srown-breasted Parakeet** Golden-plumed Parakeet Rufous-fronted Parakeet **Jolden-capped Parakeet** Sangihe Hanging Parrot Slack-cheeked Lovebird **3rey-cheeked Parakeet Blue-throated Parakeet** White-necked Parakeet **Brown-backed Parrolet** Golden-tailed Parrotlet Maroon-fronted Parrot Spot-winged Parrotlet Rothschild's Parakeet *Yellow-sided Parakeet* Red-masked Parakeet **3lue-throated Macaw** 'ellow-eared Parrot Red-fronted Macaw Mauritius Parakeet Little Blue Macaw Thick-billed Parrot Nicobar Parakeet Socorro Parakeet Hyacinth Macaw Golden Parakeet Glaucous Macaw Cuban Parakeet 31 Oro Parakeet Pearly Parakeet Lear's Macaw Psittacula eques (replaces P.echo) Bolborhynchus ferrugineifrons Anodorhynchus hyacinthinus Rhynchopsitta pachyrhyncha Anodorhynchus glaucus Brotogeris pyrrhopterus Ognorhynchus icterotis Aratinga erythrogenys Aratinga auricapillus Psittacula intermedia Agapornis nigrigenis Leptosittaca branickii Pyrrhura hypoxantha Rhynchopsitta terrisi Anodorhynchus leari Pyrrhura albipectus Loriculus catamene Psittacula caniceps Pyrrhura calliptera Aratinga guarouba Pyrrhura cruentata Ara glaucogularis Aratinga brevipes Cyanopsitta spixii Touit melanonota Pyrrhura perlata Touit stictoptera Ara rubrogenys Aratinga euops Pyrrhura orcesi Touit surda

Hanalopsittaca amazonina	Rusty-faced Parrot	¥	Colombia, Ecuador, Venezuela
Hanalonsittaca fuertesi	Fuertes' Parrot	<b>X</b>	Colombia
Hanalonsittaca nvrrhons	Red-faced Parrot	<b>K</b>	Ecuador, Peru
Amazona leucocenhala	Cuban Parrot	<b>K</b>	Cayman Is., Cuba
Amazona wittata	Puerto Rican Parrot	臼	Puerto Rico
Amazona tucumana	Tucuman Parrot	<b>K</b> *	Argentina, Bolivia
Amazona pretrei	Red-spectacled Parrot	>	Argentina, Brazil, Paraguay, Uruguay
Amazona viridigenalis	Red-crowned Parrot	>	Mexico
Amazona brasiliensis	Red-tailed Parrot	臼	Brazil
Amazona dufresniana	Blue-cheeked Parrot	$K^*$	Brazil, Venezuela, Guianas
Amazona rhodocorvtha	Red-browed Parrot	<b>K</b> *	Brazil
Amazona xanthops	Yellow-faced Parrot	<b>K</b> *	Brazil
Amazona barbadensis	Yellow-shouldered Parrot	>	Netherlands Antilles, Venezuela
Amazona ochrocephala	Yellow-crowned Parrot	$K^*$	Central & South America
Amazona minacea	Vinaceous Parrot	K*	Argentina, Brazil, Paraguay
Amazona versicolor	St. Lucia Parrot	ĸ	St Lucia
Amazona arausiaca	Red-necked Parrot	闰	Dominica
Amazona guildingii	St. Vincent Parrot	R	St Vincent
Amazona imperialis	Imperial Parrot	曰	Dominica
Triclaria malachitacea	Purple-bellied Parrot	¥,	Brazil
Strigops habroptilus	Kakapo	臼	South Island (New Zealand)
Order CUCULIFORMES			
Family Musophagidae Tauraco bannermani	Bannerman's Turaco	阳日	Cameroon
Tauraco ruspolii	Prince Kuspoli's Turaco	4	Ethopia
Family Cuculidae	Green-sheeked Bronze Cintro	-	Romano & Damar (Indonesia)
Coryzus ferrugineus Coccyzus ferrugineus	Cocos Cuckoo	, p4	Costa Rica
Phaenicophaeus pyrrhocephalus	Red-faced Malkoha	>	India, Sri Lanka

Brunei, Indonesia, Malaysia

Madagascar]

Sri Lanka

Colombia, Ecuador

Brunei, Indonesia, Malaysia

Mindoro (Philippines)

Java (Indonesia)

Centropus chlororhynchus Veomorphus radiolosus Carpococcyx radiceus Centropus nigrorufus Centropus rectunguis Centropus steerii Coua delalandei

### Order STRIGIFORMES Family Tytonidae

Phodilus prigoginei 'yto nigrobrunnea yto inexspectata Tyto soumagnei yto sororcula Tyto aurantia

### Family Strigidae

Otus stresemanni Otus sagittatus Otus angelinae Otus ireneae Otus alfredi

Otus mindorensis Otus insularis Otus pauliani

Otus hartlaubi **Bubo vosseleri** 

Glaucidium albertinum Scotopelia ussheri Ketupa blakistoni

Sanded Ground Cuckoo Sunda Ground Cuckoo Green-billed Coucal Snail-eating Coua Short-toed Coucal Steere's Coucal Javan Coucal Madagascar Red Owl lesser Masked Owl Minahassa Owl Congo Bay Owl Faliabu Owl Golden Owl

Grand Comoro Scops-owl White-fronted Scops-owl Seychelles Scops-owl Sao Tome Scops-owl Jsambara Eagle-owl Sumatran Scops-owl 3lakiston's Fish-owl Rufous Fishing Owl Mindoro Scops-owl Sokoke Scops-owl Javan Scops-owl Plores Scops-owl

New Britain (Papua New Guinea)

Buru & Tamimbar Is (Indonesia)

Sulawesi (Indonesia)

Faliabu (Indonesia)

Madagascar

Burundi, Zaire

Surma, Thailand, Indonesia, Malaysia Kenya

Sumatra (Indonesia) Java (Indonesia)

Flores (Indonesia)

Mindoro (Indonesia)

Comoro Is Seychelles

Sao Tome **Panzania** 

China, Japan, U.S.S.R. West Africa

Rwanda, Zaire

Albertine Owlet

Athene blewitti Strix occidentalis	Forest Owlet Spotted Owl	Ex [India] K* Canada, U.S., Mexico
Order CAPRIMULGIFORMES Family Podargidae Batrachostomus harterti	Dulit Frogmouth	K Kalimantan (Indonesia), Sarawak (Malaysia)
Family Nyctibiidae Nyctibius aethereus	Long-tailed Potoo	K* Brazil, Colombia, Ecuador, Guyana, Paraguay. Peru. Venezuela
Nyctibius leucopterus Nyctibius bracteatus	White-winged Potoo Rufuous Potoo	K* Brazil K* Colombia, Ecuador, Guyana, Peru
Family Caprimulgidae Eurostopodus diabolicus Siphonorhis americanus Caprimulgus nocitherus Caprimulgus centralasicus Caprimulgus pulchellus Macropsalis creagra Eleothreptus anomalus Order APODIFORMES Family Apodidae Cypseloides lemosi Hydrochous gigas	Satanic Nightjar Jamaican Pauraque Puerto Rican Nightjar White-winged Nightjar Salvadori's Nightjar Salvadori's Nightjar Long-trained Nightjar Sickle-winged Nightjar Sickle-winged Swift	I Sulawesi (Indonesia) Ex [Jamaica] R Puerto Rico K* Brazil, Paraguay I China I Sumatra & Java (Indonesia) K* Argentina, Brazil K* Argentina, Brazil, Paraguay, Uruguay K* Colombia I Sumatra & Java (Indonesia), Peninsular Malaysia R Seychelles
Aerodramus leucophaeus	Tahiti Swiftlet	V Society Is (France)

Angola, Cameroon, Fernando Po

Cook Is.

Zaire

(Equatorial Guinea), Nigeria

India

Bahia, Espirito Santo (Brazil) Pobago (Trinidad), Venezuela

Bolivia

Venezuela Costa Rica

Colombia

Mexico Mexico

Colombia Honduras

Panama, Colombia, Ecuador

Chestnut-bellied Hummingbird Sapphire-bellied Hummingbird Scissor-tailed Hummingbird Surquoise-throated Puffleg Iuan Fernandez Firecrown Pooth-billed Hummingbird Slue-capped Hummingbird White-tailed Hummingbird 7iolet-throated Metaltail Mangrove Hummingbird Purple-backed Sunbeam White-tailed Sabrewing Slack-breasted Puffleg Slack-thighed Puffleg **Ayacinth Visorbearer** Grey-bellied Comet Dark-rumped Swift Hook-billed Hermit Honduran Emerald Schouteden's Swift Fernando Po Swift Coppery Thorntail Veblina Metaltail **Pachira** Emerald Colorful Puffleg Royal Sunangel Hoary Puffleg Atiu Swiftlet Black Inca Schoutedenapus schoutedeni Taphrolesbia griseiventris Campylopterus ensipennis Sephanoides fernandensis Family Trochilidae Amazilia castaneiventris Hylonympha macrocerca Androdon aequatorialis Eriocnemis nigrivestris Eupherusa cyanophrys Eupherusa poliocerca Haplophaedia lugens Eriocnemis mirabilis Aerodramus sawtelli Heliangelus regalis Coeligena prunellei Amazilia boucardi Eriocnemis godini Metallura odomae epidopyga lilliae Eriocnemis derbyi Augastes scutatus Popelairia letitiae Aglaeactis aliciae Amazilia distans Metallura baroni Apus acuticauda Glaucis dohrnii Amazilia luciae Apus sladeniae - 50 -

Juan Fernandez Is (Chile)

Colombia

Peru

Venezuela

Colombia, Ecuador Colombia, Ecuador

Ecuador

Peru

Brazil

Peru

Colombia

Scuador Scuador

Peru

Marvellous SpatuletailK*PeruBee HummingbirdRCubaChilean WoodstarR*Bolivia, ChileLittle WoodstarK*Ecuador, PeruEsmeraldas WoodstarK*EcuadorGlow-throated HummingbirdK*Panama	Quetzal V Central America N K* Mexico, U.S.A. On K* Costa Rica, Panama	fisher India Nenal Vietnam	ingfisher V R R er R A V I V V V V V V V V V V V V V V V V V	4 Central America	Short-legged Ground Roller Scaly Ground Roller Rufous-headed Ground Roller R
Loddigesia mirabilis Calypte helenae Calypte helenae Eulidia yarrellii Acestrura bombus Acestrura berlepschi Selasphorus ardens	Order TROGONIFORMES Family Trogonidae Pharomachrus mocinno Euptilotis neoxenus Trogon bairdii Baird's Trogon	Order CORACIIFORMES Family Alcedinidae Alcedo hercules Blyth's Kingfisher	Halcyon australasia Halcyon mangaia Halcyon mangaia Halcyon gambieri Halcyon godeffroyi Halcyon bougainvillei Actenoides hombroni Tanysiptera riedelii	Family Momotidae  Electron carinatum	Family Brachypteraciidae  Brachypteracias leptosomus  Brachypteracias squamigera  Atelornis crossleyi

R Madagascar		R SE Asia R Thailand, Brunei, Indonesia, Malaysia V Sumba (Indonesia) I Burma, India, Thailand, Indonesia R Andaman Is (India) R Sulu Is (Philippines) K Burma, Indonesia, Malaysia, Thailand	K* Brazil	<ul> <li>K* Colombia</li> <li>V Colombia, Ecuador</li> <li>R Java (Indonesia)</li> <li>I Zambia</li> </ul>	K Cameroon, Ghana, Liberia	K* Peru	V U.S.A. K Cuba
Long-tailed Ground Roller		Rufous-necked Hornbill Wrinkled Hornbill Sumba Hornbill Plain-pouched Hornbill Narcondam Hornbill Sulu Hornbill Helmeted Hornbill	Three-toed Jacamar	White-mantled Barbet Toucan Barbet Black-banded Barbet White-chested Tinkerbird	Yellow-footed Honeyguide	Yellow-browed Toucanet	Red-cockaded Woodpecker Cuban Flicker
Uratelornis chimaera	Family Bucerotidae	Aceros nipalensis Aceros corrugatus Aceros everetti Aceros narcondami Anthracoceros montani Rhinoplax vigil	Order PICIFORMES Family Galbulidae Jacamaralcyon tridactyla	Family Capitonidae Capito hypoleucus Semnornis ramphastinus Megalaima javensis Pogoniulus makawai	Family Indicatoridae Melignomon eisentrauti	Family Ramphastidae Aulacorhynchus huallagae	Family Picidae Picoides borealis Colaptes fernandinae

Argentina, Brazil, Paraguay Argentina, Brazil, Paraguay Brazil, Ecuador, Peru Ryukyu Is (Japan) Argentina, Chile Laos, Vietnam Uganda, Zaire 3olivia, Peru Cuba, U.S.A. Venezuela Venezuela Mexico Bolivia Brazil Brazil Brazil Peru Brazil Chiie Peru Peru Peru Peru Peru Peru \* Chestnut-throated Spinetail White-browed Tit-spinetail Canebrake Groundcreeper Moustached Woodcreeper Red-collared Woodpecker Ivory-billed Woodpecker White-throated Barbtail African Green Broadbill Alagoas Foliage-gleaner Russet-mantled Softtail White-bellied Cinclodes ine-fronted Canastero Russet-bellied Spinetail Helmeted Woodpecker Okinawa Woodpecker Pale-tailed Canastero Imperial Woodpecker Masafuerae Raydito Bolivian Recurvebill Apurimac Spinetail Austral Canastero Striated Softtail Royal Cinclodes Orinoco Softtail Plain Spinetail Family Dendrocolaptidae Order PASSERIFORMES Clibanornis dendrocolaptoides Family Eurylaimidae Pseudocalyptomena graueri Family Furnariidae Leptasthenura xenothorax Xiphocolaptes falcirostris Campephilus principalis Thripophaga berlepschi Campephilus imperialis Aphrastura masafuerae Asthenes urubambensis Thripophaga macroura Asthenes huancavelicae Thripophaga cherriei Sapheopipo noguchii Simoxenops striatus Synallaxis infuscata Asthenes anthoides Dryocopus galeatus Cinclodes palliatus Cinclodes aricomae Synallaxis courseni Synallaxis zimmeri Synallaxis cherriei Margarornis tatei Philydor novaesi Picus rabieri

Automolus erythrocephalus Megaxenops parnaguae Automolus ruficollis

## Family Formicariidae

Rhegmatorhina hoffmannsi Herpsilochmus pectoralis Formicivora erythronotos Thamnomanes plumbeus Thamnophilus zarumae Herpsilochmus pileatus Cercomacra carbonaria Myrmeciza stictothorax Thamnophilus praecox Herpsilochmus parkeri Cercomacra brasiliana Formicarius rufifrons Phlegopsis barringeri Myrmeciza griseicens Formicivora iheringi Myrmeciza ruficauda Rhopornis ardesiaca Mymotherula grisea Mymotherula minor Biatas nigropectus Xenornis setifrons Clytoctantes alixii Terenura sharpei Pyriglena atra Terenura sicki

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Rufous-necked Foliage-gleaner Henna-hooded Foliage-gleaner	* *	Ecuador, Peru Ecuador, Peru
Great Xenops	<b>K</b> *	Brazil
White-bearded Antshrike	<b>K</b> *	Argentina, Brazil
Chapman's Antshrike	K*	Ecuador, Peru
Cocha Antshrike	$K^*$	Ecuador, Peru
Recurve-billed Bushbird	K*	Colombia, Venezuela
Speckled Antshrike	K*	Panama, Colombia
Plumbeous Antshrike	K*	Brazil
Salvadori's Antwren	<b>K</b> *	Brazil
Ashy Antwren	K*	Bolivia
Black-capped Antwren	K*	Brazil
Pectoral Antwren	K*	Brazil
Ash-throated Antwren	K*	Peru
Narrow-billed Antwren	>	Brazil
Black-hooded Antwren	团	Brazil
Yellow-rumped Antwren	K*	Bolivia, Peru
Orange-bellied Antwren	<b>K</b> *	Brazil
Rio de Janeiro Antbird	<b>K</b> *	Brazil
Rio Branco Antbird	K*	Brazil
Fringe-backed Fire-eye	田	Bahia (Brazil)
Slender Antbird	Λ	Bahia (Brazil)
Scalloped Antbird	<b>K</b> *	Brazil
Grey-headed Antbird	K*	Ecuador, Peru
Spot-breasted Antbird	<b>K</b> *	Brazil
White-breasted Antbird	<b>K</b> *	Brazil
Argus Bare-eye	<b>K</b> *	Colombia
Rufous-fronted Antthrush	Κ*	Peru
	4 4 4	C. 1

Colombia, Ecuador

Colombia

Moustached Antpitta Giant Antpitta

Frallaria gigantea

Grallaria alleni

* Venezuela * Colombia Colombia, Ecuador * Colombia, Venezuela	* Brazil	Bahia (Brazil) Goias (Brazil)	.* Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela	
* * * * *	<b>K</b> *	н н	<b>K</b> *	K CKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKK
Tachira Antpitta Bicolored Antpitta Brown-banded Antpitta Crescent-faced Antpitta Hooded Antpitta	Hooded Gnateater	Stresemann's Bristlefront Brasilia Tapaculo	Shrike-like Cotinga	Swallow-tailed Cotinga Grey-winged Cotinga Black-headed Berryeater White-cheeked Cotinga Buff-throated Purpletuft Kinglet Calyptura Cinnamon-vented Piha Turquoise Cotinga Banded Cotinga White-winged Cotinga Yellow-billed Cotinga Bare-necked Umbrellabird Long-wattled Umbrellabird Long-wattled Umbrellabird
Grallaria chthonia Grallaria rufocinerea Grallaria milleri Grallaricula lineifrons Grallaricula cucullata	Family Conopophagidae Conopophaga roberti	Family Rhinocryptidae Merulaxis stresemanni Scytalopus novacapitalis	Family Cotingidae Laniisoma elegans	Phibalura flavirostris Tijuca condita Carpornis melanocephalus Ampelion stresemanni Iodopleura pipra Calyptura cristata Lipaugus lanioides Cotinga ridgwayi Cotinga maculata Xipholena atropurpurea Carpodectes antoniae Caphalopterus glabricollis Cephalopterus penduliger Family Pipridae

		444	
Pipra vilasboasi	Golden-crowned Manakin	, v	brazu
Family Tyrannidae			
Hemitriccus aenigma	Zimmer's Tody-tyrant	<b>K</b> *	Brazil
Hemitriccus cinnamomeipectus	Cinnamon-breasted Tody-tyrant	K*	Ecuador, Peru
Idioptilon kaempferi	Kaempfer's Tody-tyrant	K*	Brazil
Ceratotriccus furcatus	Fork-tailed Tody-tyrant	K*	Brazil
Todirostrum viridanum	Short-tailed Tody-flycatcher	K*	Venezuela
Anairetes alpinus	Ash-breasted Tit-tyrant	K*	Bolivia, Peru
Serpophaga arguayae	Bananal Tyrannulet	K*	Brazil
Culicivora caudacuta	Sharp-tailed Tyrant	K*	Argentina, Bolivia, Brazil, Paraguay
Polystictus pectoralis	Bearded Tachuri	K*	South America
Polystictus superciliaris	Grey-backed Tachuri	<b>K</b> *	Brazil
Phylloscartes roquettei	Minais Gerais Tyrannulet	K*	Brazil
Phylloscartes paulistus	Sao Paulo Tyrannulet	K*	Brazil, Paraguay
Phylloscartes ceciliae	Long-tailed Tyrannulet	<b>K</b> *	Brazil
Platyrinchus leucoryphus	Russet-winged Spadebill	K*	Brazil, Paraguay
Empidonax griseipectus	Grey-breasted Flycatcher	$K^*$	Ecuador, Peru
Xolmis dominicana	Black-and-White Monjita	K*	Argentina, Brazil, Paraguay, Uruguay
Agriornis andicola	White-tailed Shrike-tyrant	<b>K</b> *	Argentina, Bolivia, Chile, Ecuador,
			Peru
Yetapa risoria	Strange-tailed Tyrant	<b>*</b>	Argentina, Brazil, Paraguay, Uruguay
Family Phytotomidae	יייייים די	*	
Phytotoma raimondi	Feruvian Flancouter	4	Feru
Family Pittidae			
Pitta schneideri	Schneider's Pitta	<u>ස</u> අ	Sumatra (Indonesia)
Pitta elliotii	Bar-bellied Pitta	¥	Cambodia, Laos, Thailand, Vietnam

Burma, Thailand Luzon (Philippines) China, Hong Kong, Japan, S. Korea, Taiwan. Malavsia	Bismarck Arch. (Papua New Guinea) Philippines Bougainville, Solomon Is.	[New Zealand]	Madagascar	Australia W. Australia	Somalia Ethiopia Somalia Lesotho, Swaziland Ethiopia South Africa Cape Verde Is.	Thailand Bahamas Ethiopia Sudan
因」民	I H I	EX X	ы	路田	KKILIE	KKK
Gurney's Pitta Whiskered Pitta Fairy Pitta	Superb Pitta Azure-breasted Pitta Black-faced Pitta	Bush Wren	Small-billed Asity	Rufous Scrub-bird Noisy Scrub-bird	Ash's Lark Degodi Lark Archer's clawed Lark Rudd's Lark Sidamo Lark Botha's Lark Raso Lark	White-eyed River Martin Bahama Swallow White-tailed Swallow Red Sea Cliff Swallow
Pitta gurneyi Pitta kochi Pitta nympha	Pitta superba Pitta steerii Pitta anerythra	Family Xenicidae Xenicus longipes	Family Philepittidae Neodrepanis hypoxanthus	Family Atrichornithidae Atrichornis rufescens Atrichornis clamosus	Family Alaudidae Mirafra ashi Mirafra degodiensis Heteromirafra archeri Heteromirafra ruddi Heteromirafra sidamoensis Spizocorys fringillaris Alauda razae	Family Hirundinidae Pseudochelidon sirintarae Tachycineta cyaneoviridis Hirundo megaensis

#### Family Motacillidae Anthus sokokensis Anthus chacoensis Anthus chloris

## Family Campephagidae

Anthus nattereri

Coracina coerulescens Campephaga lobata Coracina schistacea Coracina newtoni Coracina ostenta Coracina typica Coracina sula

### Family Pycnonotidae

Phyllastrephus tenebrosus Phyllastrephus cinereiceps Pycnonotus nieuwenhuisii Phyllastrephus leucolepis Chlorocichla prigoginei Phyllastrephus apperti Criniger olivaceus

Hypsipetes siquijorensis Hypsipetes olivaceus

#### Family Laniidae Laniarius liberatus Prionops gabela

Yellow-breasted Pipit Ochre-breasted Pipit Sokoke Pipit Chaco Pipit

White-winged Cuckoo-shrike Mauritius Cuckoo-shrike Reunion Cuckoo-shrike Blackish Cuckoo-shrike Ghana Cuckoo-shrike Slaty Cuckoo-shrike Sula Cuckoo-shrike

Grey-crowned Greenbul Yellow-bearded Bulbul Prigogine's Greenbul Slue-Wattled Bulbul Appert's Greenbul Liberian Greenbul Dusky Greenbul

Streak-breasted Bulbul Mauritius Bulbul

Gabela Helmet-shrike Buulobarde Boubou

Kenya, Tanzania

Lesotho, Southern Africa Argentina, Paraguay

Argentina, Brazil, Paraguay

Banggai & Sula Is (Indonesia)

Mauritius Reunion Luzon (Philippines)

Sula Is (Indonesia)

Philippines

Ghana, Guinea, Cote d'Ivoire, Liberia, Sierra Leone

Kalimantan & Sumatra (Indonesia) Zaire

Liberia

Madagascar

Madagascar

Madagascar

Ghana, Guinea, Cote d'Ivoire, Liberia,

Senegal, Sierra Leone

Philippines

Mauritius

Angola Somalia \*

I Cameroon R Cameroon, Nigeria R Tanzania I Angola, Cameroon I Sao Tome	R Madagascar R Madagascar	I Argentina, Bolivia	K* Mexico V Colombia R Mexico I Cuba K* Colombia R* Clarion Is (Mexico)	<ul><li>K* Galapagos Is. (Ecuador)</li><li>E Socorro Is (Mexico)</li><li>E Martinique, St Lucia</li></ul>	I China, India R Mozambique, Tanzania, Zimbabwe I Angola R Kenya, Malawi, Mozambique, Tanzania I Mongolia, China
Mount Kupe Bush-Shrike Green-breasted Bush-shrike Uluguru Bush-shrike Monteiro's Bush-shrike Sao Tome Fiscal Shrike	Van Dam's Vanga Pollen's Vanga	Rufous-throated Dipper	Slender-billed Wren Apolinar's Marsh Wren Socorro Wren Zapata Wren Niceforo's Wren Clarion Wren	Floreana Mockingbird Socorro Mockingbird White-breasted Thrasher	Rusty-bellied Shortwing Swynnerton's Robin Gabela Akalat East Coast Akalat Rufous-headed Robin
Malaconotus kupeensis Malaconotus gladiator Malaconotus alius Malaconotus monteiri Lanius newtoni	Family Vangidae Xenopirostris damii Xenopirostris polleni	Family Cinclidae Cinclus schulzi	Family Troglodytidae Hylorchilus sumichrasti Cistothorus apolinari Thryomanes sissonii Ferminia cerverai Thryothorus nicefori Troglodytes tanneri	Family Mimidae Nesomimus trifasciatus Mimodes graysoni Ramphocinclus brachyrus	Family Muscicapidae Brachypteryx hyperythra Swynnertonia swynnertoni Sheppardia gabela Sheppardia gunningi

Fimor, Roti, & Semau (Indonesia) Kalimantan (Indonesia), Sabah & E. Africa, Southern Africa, Zaire China, Burma, India, Thailand Mongolia, China, India, Nepal Jesser Sundas (Indonesia) Saudi Arabia, N. Yemen Fanimbar Is (Indonesia) Tanimbar Is (Indonesia) Mozambique, Tanzania Malawi, Mozambique Sumatra (Indonesia) Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Hawaiian Is (U.S.A.) Cuzon (Philippines) Sarawak (Malaysia) Canary Is. (Spain) Java (Indonesia) China, Thailand India, Pakistan Angola, Zaire Madagascar Madagascar Seychelles Seychelles Sri Lanka **Tanzania Tanzania** Uganda Kenya Japan Sri Lanka Whistling-thrush White-headed Robin-chat Jsambara Ground Robin Tuerteventura Stonechat Seychelles Magpie Robin White-browed Bushcha! Spotted Ground-thrush White-bellied Bushchat Orange-banded Thrush Fawn-breasted Thrush Porest Ground-thrush Kibale Ground-thrush **Slack-throated Robin** 3enson's Rockthrush ringa Ground Robin Jodgson's Bushchat Slaty-backed Thrush Frey-sided Thrush Sumatran Cochoa Everett's Thrush Luzon Redstart Amami Thrush Yemen Thrush Dapple-throat Thyolo Alethe avan Cochoa **3lack Shama Faita Thrush** Olomao <sup>2</sup>uaiohi Samao Dryocichloides montanus Modulatrix orostruthus Myadestes myadestinus Copsychus sechellarum Saxicola macrorhynca Zoothera oberlaenderi Myadestes lanaiensis Copsychus cebuensis **Furdus** menachensis Dryocichloides lowei Zoothera kibalensis Cossypha heinrichi Myiophoneus blighi Zoothera schistacea Myadestes palmeri Saxicola gutturalis Rhyacornis bicolor Erithacus obscura Alethe choloensis Monticola bensoni Saxicola insignis Saxicola dacotiae Zoothera machiki Zoothera fischeri Zoothera everetti Zoothera peronii Zoothera major Cochoa beccarii Cochoa azurea Turdus helleri Turdus feae

K* Australia K Bangladesh, India I Kalimantan (Indonesia) Sumatra (Indonesia) I Mindano (Philippines) I Vietnam K Luzon (Philippines) I India	K Bhutan, India, Nepal R India R Burma, India R Thailand V Negros & Panay (Philippines) V Negros & Panay (Philippines) V Java (Indonesia) R Laos R India	V Bangladesh, Burma, India, Nepal, Pakistan V Kenya V Sri Lanka I Vietnam K China I China I Vietnam I Vietnam I Vietnam I Vietnam I Vietnam V China V China	I Vietnam I Madagascar I Bangladesh, Bhutan, Burma, India, Nepal R China
Western Whipbird Marsh Babbler Black-browed Babbler Vanderbilt's Babbler Bagobo Babbler Short-tailed Scimitar-babbler Rabor's Wren-babbler Rusty-throated Wren-babbler	Rufous-throated Wren-babbler Tawny-breasted Wren-babbler Wedge-billed Wren-babbler Deignan's Babbler Flame-templed Babbler Negros Babbler White-breasted Babbler Sooty Babbler Snowy-throated Babbler	Jerdon's Babbler Hinde's Pied Babbler Ashy-headed Laughingthrush Black-hooded Laughingthrush Sukatschev's Laughingthrush White-speckled Laughingthrush Collared Laughingthrush Emei Shan Liocichla Gold-fronted Fulvetta	Grey-crowned Crocias Madagascar Yellowbrow Black-breasted Parrotbill Crested Parrotbill

Stachyris grammiceps

Stachyris herberti

Stachyris nigrorum

Moupinia altirostris

Stachyris oglei

Garrulax cinereifrons

Garrulax milleti

Turdoides hindei

Garrulax sukatschewi

Paradoxornis flavirostris

Paradoxornis zappeyi

Crossleyia xanthophrys

Crocias langbianis

Alcippe variegaticeps

Liocichla omeiensis

Garrulax yersini

Garrulax bieti

Trichastoma perspicillatum

Trichastoma vanderbilti

Jabouilleia danjoui

Napothera rabori

Leonardina woodi

Psophodes nigrogularis

Pellorneum palustre

Spelaeornis longicaudatus

Sphenocichla humei

Stachyris rodolphei Stachyris speciosa

Spelaeornis badeigularis

Spelaeornis caudatus

K China	R China, Burma, Laos, Thailand, Vietnam	R China, Bangladesh, Bhutan, Burma, India, Laos, Vietnam	V West Africa	V Cameroon, Eq. Guinea, Gabon,		V Burundi, Rwanda, Uganda, Zaire		R China, India, Nepal, Pakistan		R China	E Nauru		E Rodrigues (Mauritius)	R Seychelles	E Aldabra (Seychelles)		Zaire, Zambia	I Solomon Is.	I Socotra (S. Yemen)	K Kenya	R Bangladesh, India, Pakistan	K Cameroon, Chad, Nigeria		Tanzania	K Tanzania, Uganda	R Burundi, Rwanda, Tanzania, Zaire	R Zaire	R Mozambique, Tanzania	R Tanzania
Przewalski's Parrotbill	Short-tailed Parrotbill	Rufous-headed Parrotbill	White-necked Picathartes	Grey-necked Picathartes	Cuban Gnatcatcher	Grauer's Scrub-warbler	Ja Scrub-warbler	Large-billed Bush-warbler	Aquatic Warbler	Streaked Reed-warbler	Nauru Reed-warbler	Millerbird	Rodrigues Brush Warbler	Seychelles Brush Warbler	Aldabra Warbler	Papyrus Yellow Warbler		Sombre Leaf Warbler	Socotra Cisticola	Tana River Cisticola	Long-tailed Prinia	River Prinia	White-winged Apalis		Karamoja Apalis	Kungwe Apalis	Kabobo Apalis	Long-billed Apalis	Mrs Moreau's Warbler
Paradoxornis przewalskii	Paradoxornis davidianus	Paradoxornis ruficeps	Picathartes gymnocephalus	Picathartes oreas	Polioptila lembeyei	Bradypterus graueri	Bradypterus grandis	Bradypterus major	Acrocephalus paludicola	Acrocephalus sorghophilus	Acrocephalus rehsei	Acrocephalus familiaris	Acrocephalus rodericanus	Acrocephalus sechellensis	Nesillas aldabranus	Chloropeta gracilirostris		Phylloscopus amoenus	Cisticola haesitata	Cisticola restricta	Prinia burnesii	Prinia fluviatilis	Apalis chariessa		Apalis karamojae	Apalis argentea	Apalis kaboboensis	Apalis moreaui	Bathmocercus winifredae

Megalurus albolimbatus Macrosphenus pulitzeri Amaurocichla bocagii Chaetornis striatus Eremomela turneri Megalurus pryeri

delaenornis annamarulae phelocephala pectoralis Shinomyias albigularis Rhinomyias brunneata Dasyornis longirostris Humblotia flavirostris Ferygone hypoxantha Newtonia fanovanae Rhinomyias colonus Amytornis dorotheae Amytornis barbatus Ficedula bonthaina icedula timorensis Malurus coronatus Amytornis goyderi Amytornis textilis Trichocichla rufa Muscicapa lendu Ficedula harterti Petroica traversi Ticedula henrici Yornis sanfordi Yornis herioti Cyornis ruecki Satis minima

Bangladesh, India, Nepal Kenya, Uganda, Zaire China, Japan Indonesia) Sao Tome Australia Australia **Bristled Grass Warbler** Turner's Eremomela Jong-legged Warbler Sao Tome Short-tail Fly River Grassbird Pulitzer's Longbill Marsh Grassbird

Purple-crowned Fairy-wren Carpentarian Grass-wren Phick-billed Grass-wren Western Bristlebird 3yrean Grass-wren Grass-wren

White-throated Jungle-flycatcher Chestnut-breasted Whiteface Nimba Flycatcher Biak Gerygone

**Brown-chested Jungle-fly-atcher** Henna-tailed Jungle-flycatcher

Jompobattang Flycatcher Slack-banded Flycatcher Jamar Blue Flycatcher Matinan Flycatcher Sumba Flycatcher

Slue-breasted Flycatcher Rueck's Blue Flycatcher Chapin's Flycatcher

Frand Comoro Flycatcher Chatham Island Robin Red-tailed Newtonia

Jabon Batis

Papua New Guinea, Irian Jaya

Australia Australia

Australia

Siak (Indonesia) Australia

Australia

Guimaras & Negros (Philippines) Cote d'Ivoire, Liberia

Sula Is & Peleng (Indonesia) China, India

Sulawesi (Indonesia) Jamar (Indonesia)

Sumba (Indonesia) Timor (Indonesia)

Sumatra (Indonesia) Sulawesi (Indonesia)

Kenya, Uganda, Zaire Juzon (Philippines)

Comoros

Chatham Is (New Zealand) Madagascar

Gabon

E Cameroon R Seychelles Ex [Sanghe (Indonesia)] R Philippines K Philippines E Cook Is (New Zealand) E Society Is (France) V Marquesas (France) R Marquesas (France)	R Marquesas (France) R Solomon Is. R Caroline Is (F.S.M.) I Tanahjampea (Indonesia) I Boano (Indonesia) R Biak (Indonesia) E Guam (U.S.A.) R Biak & Numfor (Indonesia) I Solomon Is. K* Australia R Irian Jaya (Indonesia) V India V Taiwan	I Burma R Algeria V China I Vietnam R China, Burma, Thailand R China, Bangladesh, Bhutan, Burma, India, Laos, Vietnam
Banded Wattle-eye Seychelles Paradise Flycatcher Caerulean Paradise Flycatcher Short-crested Monarch Celestial Monarch Rarotonga Monarch Tahiti Monarch Marquesas Monarch Iphis Monarch	Fatuhiva Monarch Rennell Shrikebill Truk Monarch White-tipped Monarch Black-chinned Monarch Guam Flycatcher Biak Flycatcher Malaita Fantail Red-lored Whistler Vogelkop Whistler White-winged Tit	White-browed Nuthatch Algerian Nuthatch Black-masked Nuthatch Yellow-billed Nuthatch Giant Nuthatch Beautiful Nuthatch
Platysteira laticincta Terpsiphone corvina Eutrichomyias rowleyi Hypothymis helenae Hypothymis coelestis Pomarea dimidiata Pomarea nigra Pomarea nibris	Pomarea whitneyi Clytorhynchus hamlini Metabolus rugiensis Monarcha everetti Monarcha brehmii Myiagra freycineti Myiagra atra Rhipidura malaitae Pachycephala rufogularis Pachycephala meyeri Family Paridae Parus nuchalis	Family Sittidae Sitta victoriae Sitta ledanti Sitta yunnanensis Sitta solangiae Sitta magna Sitta formosa

R Luzon (Philippines)	R Natuna Is (Indonesia), Peninsular	K* Australia	R Tanzania R Kenya, Tanzania		E Zaire	R Tanzania		V Sangihe & Siau (Indonesia)		R Java & Kalimantan (Indonesia), Sarawak (Malavsia)	I Kai Is (Indonesia)		K Tagula I. (Papua New Guinea)	R Ambon (Indonesia)	R Solomon Is.		E Norfolk I. (Australia)	E Seychelles	R Comoros	V Mauritius
Long-billed Rhabdornis	Brown-backed Flowerpecker	Forty-spotted Pardalote	Banded Green Sunbird Amani Sunbird	Apricot-breasted Sunbird Rockefeller's Sunbird	Marunga Sunbird	Rufous-winged Sunbird	Giant Sunbird	Elegant Sunbird		Javan White-eye	Golden-bellied White-eye	Lemon-throated White-eye	Tagula White-eye	Ambon Yellow White-eye	Splendid White-eye	Nendo White-eye	White-chested White-eye	Seychelles White-eye	Mount Karthala White-eye	Mauritius Olive White-eye
Family Rhabdornithidae Rhabdornis grandis	Family Dicaeidae Dicaeum everetti	Paradalotus quadragintus	Family Nectariniidae Anthreptes rubritorques Anthreptes pallidigaster	Nectarinia buettikoferi Nectarinia polofelleri	Nectarinia prigoginei	Nectarinia rufipennis	Dreptes thomensis	Aethopyga duyvenbodei	Family Zosteropidae	Zosterops flavus	Zosterops uropygialis	Zosterops anomalus	Zosterops meeki	Zosterops kuehni	Zosterops luteirostris	Zosterops sanctaecrucis	Zosterops albogularis	Zosterops modestus	Zosterops mouroniensis	Zosterops chloronothus

China, Japan, Taiwan, Philippines lagula I. (Papua New Guinea) Halmahera, Bacan & Morotai Bioko (Equatorial Guinea) North Is (New Zealand) rian Jaya (Indonesia) Principe (Sao Tome) Hawaiian Is (U.S.A.) Nendo (Solomon Is) Hawaiian Is (U.S.A.) Papua New Guinea Wetar (Indonesia) Wetar (Indonesia) Timor (Indonesia) Pohnpei (F.S.M.) Buru (Indonesia) Pruk Is (F.S.M.) Bonin Is (Japan) Indonesia) Guadalupe Australia Australia Mexico Cuba Crimson-hooded Honeyeater Rufous-throated White-eye Black-chested Honeyeater **Bonin Islands Honeyeater** Japanese Yellow Bunting Spot-breasted White-eye Long-bearded Melidectes Pernando Po Speirops Sierra Madre Sparrow Jong-billed White-eye Sanford's White-eye Regent Honeyeater Principe Speirops Tagula Meliphaga Black-eared Miner Guadalupe Junco Brass's Friarbird Truk White-eye **Dusky Friarbird** Zapata Sparrow Bishop's Oo Stitchbird Kauai Oo Family Meliphagidae Family Emberizidae Philemon fuscicapillus Torreornis inexpectata spalopteron familiare Woodfordia lacertosa Xanthomyza phrygia Emberiza sulphurata Speirops leucophaea Manorina melanotis Madanga ruficollis Melidectes princeps Speirops brunneus Lichmera notabilis lotiomystis cincta Rukia longirostra Meliphaga vicina Myzomela kuehni Xenospiza baileyi Philemon brassi Junco insularis Moho braccatus Heleia muelleri

Tristan da Cunha Tristan da Cunha Pristan da Cunha

Chile, Peru

Slender-billed Finch

Xenospingus concolor

Rowettia goughensis

Nesospiza acunhae

Vesospiza wilkinsi

Grosbeak Bunting

Tristan Bunting

Gough Bunting

Rukia ruki

Moho bishopi

Argentina, Brazil, Paraguay, Uruguay Argentina, Bolivia, Brazil, Paraguay Argentina, Brazil, Paraguay Argentina, Brazil, Paraguay Argentina, Brazil, Uruguay Galapagos (Ecuador) Galapagos (Ecuador) Colombia, Ecuador Colombia, Ecuador Argentina, Bolivia Argentina, Brazil Argentina, Brazil Rio de Janeiro Costa Rica Argentina Argentina Colombia Colombia Colombia Colombia Colombia St Lucia Ecuador Bolivia Bolivia Brazil Peru Peru Peru Folden-backed Mountain-tanager Rufous-breasted Warbling-finch Cochabamba Mountain-finch (ellow-green Bush-tanager 3lack-cheeked Ant-tanager Plain-tailed Warbling-finch Rufous-rumped Seedeater Cherry-throated Tanager Olive-headed Brush-finch Tucuman Mountain-finch **Buffy-throated Seedeater** Pale-headed Brush-finch Slackish-blue Seedeater Slack-and-gold Tanager Rufous-bellied Saltator Grey-winged Inca-finch Temminck's Seedeater Entre Rios Seedeater St. Lucia Black Finch Gold-ringed Tanager Black-masked Finch Jone-billed Tanager Chestnut Seedeater Floreana Tree-finch Sooty Ant-tanager 'umaco Seedeater Marsh Seedeater Mangrove Finch Yellow Cardinal Panager-finch **Buthraupis** melanochlamys Chlorospingus flavovirens Buthraupis aureodorsalis Oreothraupis arremonops Camarhynchus heliobates Conothraupis mesoleuca Melanospiza richardson Sporophila cinnamomea Buthraupis aureocincta Sporophila hypochroma Coryphaspiza melanotis Sporophila falcirostris Camarhynchus pauper Habia atrimaxillaris Amaurospiza moesta Sporophila palustris Atlapetes pallidiceps Gubernatrix cristata Sporophila insulata Sporophila frontalis Saltator rufiventris Sporophila zelichi Atlapetes flaviceps Poospiza rubecula Habia gutturalis Poospiza Rarleppi Poospiza alticola Vemosia rourei Incaspiza ortizi Poospiza baeri - 67 -

Venezuelan Flowerpiercer Green-throated Euphonia Black-polled Yellowthroat Orange-throated Tanager Golden-cheeked Warbler Scarlet-breasted Dacnis Azure-rumped Tanager Seven-colored Tanager Multicoloured Tanager Green-capped Tanager Altamira Yellowthroat Black-backed Tanager Tellow-faced Redstart White-bellied Dacnis Black-legged Dacnis Bachman's Warbler Kirtland's Warbler Whistling Warbler Semper's Warbler Turquoise Dacnis Vitelline Warbler Sira Tanager Vetmorethraupis sterrhopteron langara meyerdeschauenseei Chlorochrysa nitidissima Family Parulidae Diglossa venezuelensis Dendroica chrysoparia Basileuterus griseiceps Seothlypis flavovelata Vermivora bachmanii Dendroica kirtlandii Catharopeza bishopi Tangara peruviana Geothlypis speciosa Dendroica vitellina Euphonia chalybea Leucopeza semperi Tangara fastuosa Dacnis albiventris Tangara cabanisi Tangara phillipsi Dacnis berlepschi Myioborus pariae Dacnis hartlaubi Dacnis nigripes

Conirostrum tamarugense

Conirostrum margaritae

Xenoligea montana

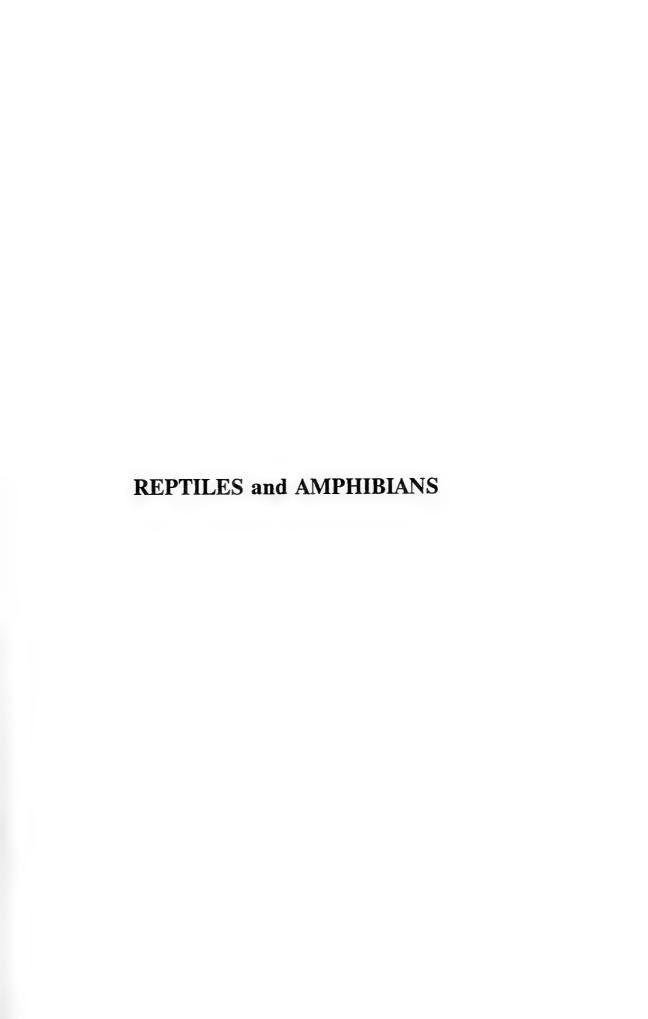
Basileuterus cinereicollis

V Hawaii (U.S.A.) E Hawaii (U.S.A.) E Hawaii (U.S.A.) Ex [Hawaii (U.S.A.)] E Hawaii (U.S.A.) R Hawaii (U.S.A.) R Hawaii (U.S.A.) R Hawaii (U.S.A.) E Hawaii (U.S.A.) R Hawaii (U.S.A.) R Hawaii (U.S.A.) E Hawaii (U.S.A.) R Hawaii (U.S.A.) R Hawaii (U.S.A.) R Hawaii (U.S.A.)	<ul> <li>K* Oklahoma, Texas (U.S.A.), Mexico</li> <li>K* Brazil</li> <li>K* Peru</li> <li>V Martinique (Lesser Antilles)</li> <li>V Montserrat (Leeward Is)</li> <li>K* Argentina, Bolivia, Brazil, Paraguay,</li> <li>Uruguay</li> <li>V Puerto Rico</li> <li>K* Argentina, Brazil, Uruguay</li> <li>K* Colombia</li> <li>K* Brazil</li> </ul>
Akiapolaau Akialoa Nukupuu Kauai Creeper Mulokai Creeper Oahu Creeper Akepa Maui Parrotbill Nihoa Finch Laysan Finch Ou Palila Poo Uli Crested Honeycreeper	Black-capped Vireo Chestnut-mantled Oropendola Para Oropendola Selva Cacique Martinique Oriole Montserrat Oriole Saffron-cowled Sunbird Yellow-shouldered Blackbird Lesser Red-breasted Meadowlark Red-bellied Grackle Forbes's Blackbird
Family Drepanididae Hemignathus munroi Hemignathus obscurus Hemignathus lucidus Oreomystis bairdi Paroreomyza flammea Paroreomyza flammea Paroreomyza flammea Talespiza ultima Telespiza ultima Telespiza cantans Psittirostra psittacea Loxioides bailleui Melamprosops phaeosoma Palmeria dolei	Family Vireonidae Vireo atricapillus Family Icteridae Psaracolius cassini Psarocolius bifasciatus Cacicus koepckeae Icterus bonana Icterus oberi Xanthopsar flavus Agelaius xanthomus Sturnella defilippi Hypopyrrhus pyrohypogaster Curaeus forbesi

#### Angola, Congo, Gabon, Zaire Mindano (Philippines) Luzon (Philippines) Cameroon, Nigeria Brazil, Venezuela Canary Is (Spain) Angola, Congo Sao Tome Cameroon Venezuela Colombia Australia **Panzania** Ethiopia Ethiopia Ecuador Somalia Nigeria Kenya Zaire aire Zaire India Zaire India \* Fanzanian Mountain Weaver Green-faced Parrotfinch Bronze-brown Cowbird Pink-billed Parrotfinch Red-eared Parrotfinch Slack-chinned Weaver Yellow-throated Serin Jolden-naped Weaver Yellow-legged Weaver Bannerman's Weaver 'inn's Baya Weaver ake Lufira Weaver Sao Tome Grosbeak Yellow-faced Siskin Black-lored Waxbill Warsangli Linnet Anambra Waxbill Clarke's Weaver Green Avadavat Loango Weaver Bates's Weaver Gouldian Finch Slue Chaffinch Ankober Serin Saffron Siskin Red Siskin Family Fringillidae Family Estrildidae Erythrura kleinschmidti Family Ploceidae Ploceus megarhynchus Carduelis siemiradzkii Ploceus subpersonatus Erythrura viridifacies Serinus ankoberensis Ploceus nigrimentum Ploceus aureonucha Estrilda poliopareia Ploceus bannermani Carduelis cucullata Amandava formosa Molothrus armenti Carduelis yarrellii Estrilda nigriloris Acanthis johannis Erythrura coloria Serinus flavigula Neospiza concolor Chloebia gouldiae Fringilla teydea Ploceus flavipes Ploceus golandi Ploceus ruweti Ploceus nicolli Ploceus batesi

<ul> <li>K* Uganda</li> <li>E Nigeria</li> <li>I Cote d'Ivoire, Liberia, Sierra Leone</li> <li>E Mauritius</li> <li>R Seychelles</li> <li>E Rodrigues (Mauritius)</li> </ul>	I Vanuatu Ex [Caroline Islands (F.S.M.)] E Cook Is. K* Kenya, Tanzania E Bali (Indonesia) R Banggai & Sula Is (Indonesia) R Sula Is (Indonesia)	R Luzon (Philippines) I China R Comoros R Mayotte (France)	V New Zealand R New Zealand	K Irian Jaya (Indonesia) R Papua New Guinea
Entebbe Weaver Ibadan Malimbe Gola Malimbe Mauritius Fody Seychelles Fody Rodrigues Fody	Santo Mountain Starling Pohnpei Mountain Starling Rarotonga Starling Abbott's Starling Bali Starling Helmeted Myna Bare-eyed Myna	Isabela Oriole Silver Oriole Grand Comoro Drongo Mayotte Drongo	Kokako Saddleback	Golden-fronted Bowerbird Fire-maned Bowerbird
Ploceus victoriae Malimbus ibadanensis Malimbus ballmanni Foudia rubra Foudia sechellarum Foudia flavicans	Family Sturnidae Aplonis santovestris Aplonis pelzelni Aplonis cinerascens Cinnyricinclus femoralis Leucopsar rothschildi Basilornis galeatus Streptocitta albertinae	Family Oriolidae Oriolus isabellae Oriolus mellianus Family Dicruridae Dicrurus fuscipennis	Family Callaeidae Callaeas cinerea Creadion carunculatus	Family Ptilonorhynchidae Amblyornis flavifrons Sericulus bakeri

Family Paradisaeidae Paradigalla carunculata	Long-tailed Paradigalla	R Irian Jaya (Indonesia), Papua New Guinea
Epimachus fastuosus	Black Sicklebill	R Irian Jaya (Indonesia), Papua New Guinea
Astrapia mayeri	Ribbon-tailed Astrapia	V Irian Jaya (Indonesia), Papua New Guinea
Parotia wahnesi Paradisaea decora	Wahnes's Parotia Goldie's Bird of Paradise	R Papua New Guinea R Papua New Guinea
Family Corvidae Cyanolyca pulchra Cyanolyca nana Cyanolyca mirabilis Cyanocorax caeruleus Perisoreus internigrans Urocissa ornata Crypsirina cucullata Zavattariornis stresemanni Corvus florensis Corvus kubaryi Corvus hawaiiensis	Beautiful Jay Dwarf Jay Dwarf Jay White-throated Jay Azure Jay Sichuan Jay Sri Lanka Magpie Hooded Treepie Ethiopian Bush-crow Banggai Crow Flores Crow Marianas Crow	<ul> <li>K* Colombia, Ecuador</li> <li>K* Mexico</li> <li>K* Argentina, Brazil</li> <li>V China</li> <li>V Sri Lanka</li> <li>V Burma</li> <li>R Ethiopia</li> <li>R Banggai (Indonesia)</li> <li>R Flores (Indonesia)</li> <li>R Guam (U.S.A.)</li> <li>E Hawaiin Is (U.S.A.)</li> </ul>



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### Class REPTILIA

#### Family Carettochelyidae Order TESTUDINES Carettochelys insculpta

### Family Chelidae

Acanthochelys pallidipectoris Acanthochelys macrocephala Pseudemydura umbrina Acanthochelys spixii Phrynops rufipes Phrynops zuliae Phrynops dahli Phrynops hogei

### Family Cheloniidae

Eretmochelys imbricata Lepidochelys olivacea Lepidochelys kempii Chelonia mydas Caretta caretta

### Family Chelydridae

Macroclemys temmimckii

## Family Dermatemyidae

Dermatemys mawii

## Family Dermochelyidae

Dermochelys coriacea

K Australia, New Guinea	K Brazil R Argentina, Paraguay K Argentina, Brazil, Uruguay I Colombia I Brazil K Brazil K Venezuela K Venezuela E Western Australia
New Guinea Plateless Turtle	Big-headed Pantanal Swamp Turtle Chaco Sideneck Turtle Black Spine-necked Swamp Turtle Dahl's Toad-headed Turtle Hoge's Sideneck Turtle Red-headed Sideneck Turtle Zulia Toad-headed Turtle Western Swamp Turtle

Propical Seas & Mediterranean Gulf of Mexico Tropical Seas Propical Seas U.S.A. 田田田田 Kemp's or Atlantic Ridley Olive or Pacific Ridley Hawksbill Turtle Green Turtle

Subtropical & Temperate Seas

Loggerhead Turtle

Alligator Snapping Turtle

Central American River Turtle

Central America

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Leatherback

# Tropical & Temperate Seas

### Family Emydidae

Annamemys annamensis Cistoclemys galbinifrons Cistoclemys hainanensis Clemmys muhlenbergii Callagur borneoensis Geoclemys hamiltonii Graptemys barbouri Cuora yunnanensis Geoemyda silvatica Batagur baska

Fraptemys flavimaculata Graptemys caglei

Graptemys oculifera Heosemys depressa

Heosemys leytensis Heosemys spinosa Kachuga kachuga

Kachuga sylhetensis

Melanochelys tricarinata Kachuga trivittata Morenia ocellata

Orlitia borneensis

Pseudemys alabamensis Rhinoclemmys rubida

Terrapene coahuila Terrapene nelsoni

Trachemys scripta callirostris Trachemys stejnegeri malonei rachemys decorata

Trachemys terrapen felis

ndochinese Box Turtle Spotted Pond Turtle Annam Leaf Turtle Yunnan Box Turtle Hainan Box Turtle Painted Terrapin River Terrapin Cane Turtle 3og Turtle

Sarbour's Map Turtle

Tellow-blotched Map Turtle Jagle's Map Turtle

Arakan Forest Turtle Ringed Map Turtle evte Pond Turtle

Red-crowned Roofed Turtle Assam Roofed Turtle Spiny Turtle

**Surmese Roofed Turtle** Pricarinate Hill Turtle **3urmese Eyed Turtle** 

Alabama Red-bellied Turtle Malaysian Giant Turtle

Mexican Spotted Wood Turtle Spotted Box Turtle Aquatic Box Turtle

South American Red-lined Turtle nagua Island Turtle Hispaniolan Slider

Cat Island Turtle

S.E. Asia Vietnam

S.E. Asia Vietnam Hainan (China) South Asia U.S.A. China

U.S.A. U.S.A. India

U.S.A.

Burma U.S.A.

Leyte (Philippines)

Phailand, Indonesia, Malaysia Bangladesh, India, Nepal

Sangladesh, India Burma Bangladesh, India, Nepal 3urma

ndonesia, Malaysia

Mexico J.S.A.

Mexico

Hispaniola Mexico

Colombia, Venezuela Bahamas

**Bahamas** 

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Kinosternon angustipons Sternotherus depressus Kinosternon oaxacae Kinosternon creaseri Kinosternon dunni

## Family Pelomedusidae

Erymnochelys madagascariensis Podocnemis erythrocephala Podocnemis sextuberculata Pelusios seychellensis Podocnemis expansa Podocnemis lewyana Podocnemis unifilis

### Family Testudinidae

Geochelone elephantopus Geochelone chilensis Geochelone platynota Geochelone gigantea

Geochelone yniphora Gopherus agassizii

Gopherus flavomarginatus Gopherus berlandieri

Homopus bergeri

Malacochersus tornieri Indotestudo forstenii

Narrow-bridged Mud Turtle

South American River Turtle Rio Magdalena River Turtle

Yellow-spotted Sideneck Turtle

Argentina, Paraguay

Brazil, Colombia, Peru

Amazon Basin

Brazil, Venezuela

Madagascar

Seychelles

Amazon Basin

Colombia

Galapagos Is (Ecuador) Aldabra (Seychelles)

Burma

**Burmese Starred Tortoise** 

Radiated Tortoise

Salapagos Giant Tortoise

Chaco Tortoise

Aldabra Giant Tortoise

Madagascar

Mexico, U.S.A. Madagascar

Mexico, U.S.A.

Mexico J.S.A.

Florida Gopher Tortoise

**Fravancore Tortoise** 

Pancake Tortoise

Elongated Tortoise Berger's Tortoise

Texas Gopher Tortoise

**Bolson Tortoise** 

Desert Tortoise

Angonoka

Vamibia

ndia, S.E. Asia

ndia, Indonesia\*

Kenya, Tanzania

Flattened Musk Turtle Creaser's Mud Turtle Junn's Mud Turtle Oaxaca Mud Turtle

Costa Rica, Nicaragua, Panama

Colombia

22 1

Mexico

U.S.A.

Mexico

Madagascar Side-necked Turtle Red-headed Amazon Turtle Sevchelles Mud Turtle

Geochelone radiata

Gopherus polyphemus

Indotestudo elongata

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Phelsuma edwardnewtonii Phyllodactylus europaeus Nactus serpensinsula Phelsuma guentheri Oedura reticulata

## Family Helodermatidae

Heloderma suspectum Heloderma horridum

#### Family Iguanidae

Amblyrhynchus cristatus Conolophus subcristatus Brachylophus fasciatus Brachylophus vitiensis Conolophus pallidus Anolis roosevelti Cyclura carinata

Phrynosoma coronatum blainvillei Cyclura cychlura Cyclura pinguis Cyclura cornuta Syciura ricordii Sambelia silus Cyclura nubila Cyclura collei Cyclura rileyi

Uma inornata

European Leaf-toed Gecko Reticulated Velvet Gecko Serpent Island Gecko Rodriguez Day Gecko Gunther's Gecko

Beaded Lizard Gila Monster

South Pacific Banded Iguana Purks & Caicos Rock Iguana Culebra Island Giant Anole Galapagos Marine Iguana Barrington Land Iguana Galapagos Land Iguana Fili Crested Iguana

Hispaniola Ground Iguana Jamaican Ground Iguana Anegada Ground Iguana Rhinoceros Rock Iguana Andros Ground Iguana Cuban Ground Iguana

Coachella Fringe-toed Lizard San Joaquin Leopard Lizard San Diego Horned Lizard

Round I., Serpent I. (Mauritius) Round I. (Mauritius) W. Australia Mauritius 民》田田民

France, Italy, Tunisia

Guatemala, Mexico Mexico, U.S.A. Jalapagos Is (Ecuador)

Culebra I. (Puerto Rico) Galapagos Is (Ecuador) Ponga, Fiji

Sahamas, Turks & Caicos Is (West Galapagos Is (Ecuador)

ndies)

Hispaniola, Mona I. (Puerto Rico) Jamaica

Cayman Is (West Indies), Cuba 3ahamas

Anegada (British Virgin Is)

Hispaniola

**3ahamas** U.S.A. Mexico, U.S.A.

E Hierro (Canary Is) R Filfola I. (Malta) V Spain R Spain	R Australia R Australia R Mauritius Ex? Cape Verde Is R Pedra Brance I. (Australia) I Shortland I. (Solomon Is) I Australia	E U.S. Virgin Is V Mexico, U.S.A.	I Bangladesh, India, Nepal, Pakistan V Central-west Asia R Indonesia R Luzon (Philippines)	R U.S.A.	K Peninsular Malaysia
Hierro Giant Lizard Filfola Lizard Lilford's Wall Lizard Ibiza Wall lizard	Legless Skink Lancelin Island Skink Macabe Forest Skink Cape Verde Giant Skink Pedra Branca Skink Adelaide Pigmy Bluetongue Lizard	St. Croix Ground Lizard Orange-throated Whiptail	Yellow Monitor Central Asian Monitor Komodo Dragon Gray's Monitor	Island Night Lizard	Leonard's Pipe Snake
Family Laceridae Gallotia simonyi Podarcis filfolensis filfolensis Podarcis lilfordi Podarcis pityusensis	Family Scincidae Barkudia insularis Ctenotus lancelini Gongylomorphus bojerii fontenayi Macroscincus coctaei Pseudemoia palfreymani Tribolonotus ponceleti Triliqua adelaidensis	Family Telidae Ameiva polops Cnemidophorus hyperythrus	Family Varanidae Varanus flavescens Varanus griseus caspius Varanus komodoensis Varanus olivaceus	Family Xantusiidae Xantusia riversiana	Order SERPENTES Family Aniliidae Anomochilus leonardi

Family Boldae Acrantophis dumerili	Acrantophis madagascariensis Bolyeria multicarinata	Casarea dussumieri Charina bottae umbratica	Epicrates angulifer Epicrates inornatus	Epicrates monensis monensis	Epicrates subflavus Python molurus	Sanzinia madagascariensis

#### Masticophis lateralis euryxanthus Masticophis flagellum ruddocki Nerodia harteri paucimaculata Drymarchon corais couperi Elachistodon westermanni Nerodia fasciata taeniata Family Colubridae guanognathus werneri Coluber cypriensis Natrix natrix cetti

Thannophis sirtalis tetrataenia

Thermophis baileyi

Thamnophis hammondi

Thamnophis gigas

Nerodia sipedon insularum

Cyprus U.S.A. U.S.A. Indian Egg-eating Snake San Joaquin Coachwhip Eastern Indigo Snake Almeda Striped Racer

U.S.A. U.S.A. U.S.A. U.S.A. San Francisco Garter Snake Pwo-striped Garter Snake Atlantic Saltmarsh Snake Lake Erie Water Snake Sardinian Grass Snake Concho Water Snake Giant Garter Snake

R Australia I Australia E Central Asia I Fiji	R Rennel I. (Solomon Is)	R Mona I. (Puerto Rico)		E Central Eastern Europe I Turkey, Iran E China E Southern South America E South America
Broad-headed Snake Central Asian Cobra Fiji Snake (Bolo)		Mona Blind Snake	Queimada Island Bothrops Aruba Island Rattlesnake Ridge-nosed Rattlesnake Transcaucasian Long-nosed Viper Caucasian Viper Latifi's Viper Armenian Viper Milos Viper	Orsini's Viper Chinese Alligator Broad-nosed Caiman Black Caiman
Family Elapidae Brachyaspis atriceps Hoplocephalus bunaroides Naja oxiana Ogmodon vitianus	Family Hydrophiidae Laticauda crockeri	Family Typhlopidae Typhlops monensis	Family Viperidae Bothrops insularis Crotalus unicolor Crotalus willardi Vipera ammodytes transcaucasiana Vipera bulgardaghica Vipera kaznakovi Vipera latifii Vipera schweizeri	Vipera ursinii rakosiensis Vipera wagneri Order CROCODYLIA Family Alligatoridae Alligator sinensis Caiman latirostris Melanosuchus niger

Africa Orino		_	
Orino	Alricali Sienuer-Shouteu Crocoune	<b>→</b> 1	Airica
	Orinoco Crocodile	घ	Colombia, Venezuela, Peru
Philip	Philippines Crocodile	团	Philippines
Morel	Morelet's Crocodile	臼	Central America
Nile (	Nile Crocodile	>	Africa, Madagascar
Mars	Marsh Crocodile	^	South Asia
Estua	Estuarine Crocodile	Λ	Asia, Australia, West Pacific
Cubai	Cuban Crocodile	团	Cuba
Siame	Siamese Crocodile	ធ	South-east Asia
False	False Gharial	闰	South-east Asia
Gharial	lai	田	South Asia
Lake	Lake Patzcuaro Salamander	R	Mexico
Lake	Lake Lerma Salamander	<b>E</b>	Mexico
Santa	Santa Cruz Long-toed Salamander	田	U.S.A.
Axolotl	) T	<b>E</b>	Mexico
Califo	California Tiger Salamander	>	U.S.A.
	1		
Chine	Chinese Giant Salamander	<b>⊢</b> ⊣ 1	China
Japar	Japanese Giant Salamander	<b>x</b>	Japan

Family Gavialidae

Gavialis gangeticus

Class AMPHIBIA

Crocodylus rhombifer Crocodylus siamensis Tomistoma schlegelii

Crocodylus porosus

Family Crocodylidae

Crocodylus cataphractus

Crocodylus acutus

Crocodylus intermedius Crocodylus mindorensis

Crocodylus moreletii Crocodylus niloticus Crocodylus palustris Ambystoma macrodactylum croceum

Family Ambystomatidae Ambystoma dumerilii dumerilii

Ambystoma lermaensis

Order CAUDATA

Ambystoma tigrinum californiense

Ambystoma mexicanum

Family Cryptobranchidae

Andrias davidianus

Andrias japonicus

Afghanistan

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## Family Hynobiidae Batrachuperus mustersi

Batrachoseps simatus	Batrachoseps stebbinsi	Eurycea nana	Hydromantes brunus	Hydromantes shastae	Phaeognathus hubrichti	Plethodon larselli	Plethodon neomexicanus	Plethodon nettingi	Plethodon stormi	Speleomantes flavus	Speleomantes genei	Speleomantes imperialis	Speleomantes supramontes	Typhlomolge rathbuni	Typhlotriton spelaeus	
	Batrachoseps simatus	Batrachoseps simatus Batrachoseps stebbinsi	Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana	Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus	Batrachoseps simatus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae	Batrachoseps simatus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti	Batrachoseps simatus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti	Batrachoseps in raus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli	Batrachoseps in taus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus	Batrachoseps simatus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus Plethodon stormi	Batrachoseps in the Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus Plethodon stormi Speleomantes flavus	Batrachoseps in the Batrachoseps simulus Batrachoseps simulus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus Plethodon nettingi Plethodon stormi Speleomantes flavus Speleomantes genei	Batrachoseps simatus Batrachoseps simatus Batrachoseps simatus Burycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus Plethodon stormi Speleomantes flavus Speleomantes genei Speleomantes imperialis	Batrachoseps simatus Batrachoseps simatus Batrachoseps simatus Burycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus Plethodon stormi Speleomantes flavus Speleomantes genei Speleomantes supramontes	Batrachoseps sinatus Batrachoseps simatus Batrachoseps stebbinsi Eurycea nana Hydromantes brunus Hydromantes shastae Phaeognathus hubrichti Plethodon larselli Plethodon neomexicanus Plethodon stormi Speleomantes flavus Speleomantes genei Speleomantes supramontes Typhlomolge rathbuni	Batrachoseps in the state of th

#### Family Proteidae

Proteus anguinus

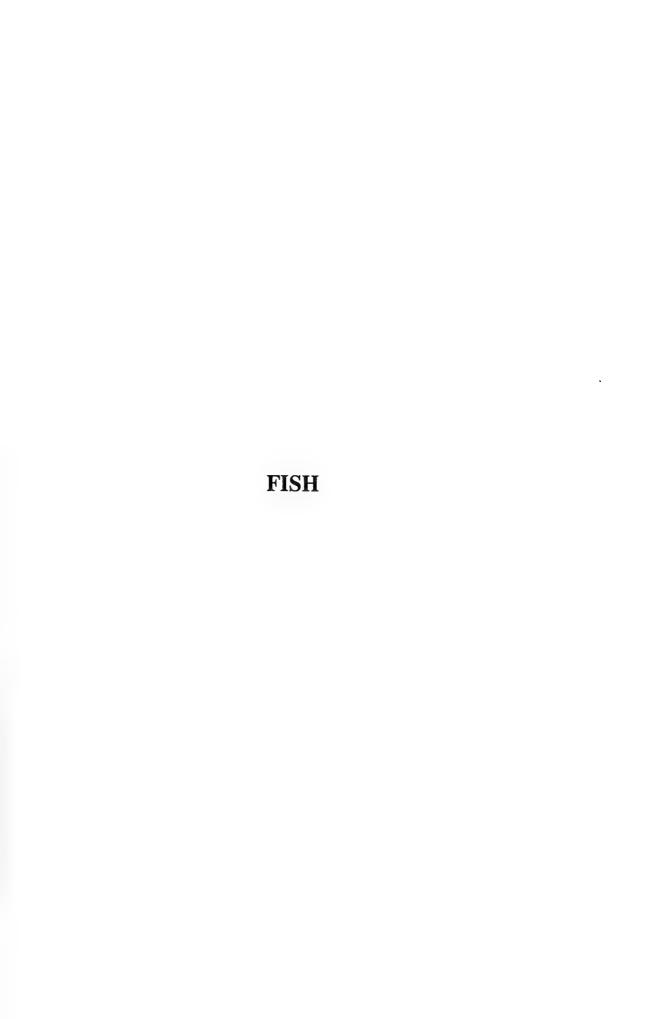
#### Family Salamandridae Chioglossa lusitanica Paramesotriton deloustali

E U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	R U.S.A.	I U.S.A.	V U.S.A.	K U.S.A.	K U.S.A.	R Sardinia (Italy)	V Sardinia (Italy)	R Sardinia (Italy)	R Sardinia (Italy)	E U.S.A.	K U.S.A.	V Italy, Yugoslavia	9-1/2	I Portugal, Spain
Desert Slender Salamander	Kern Canyon Slender Salamander	Tehachapi Slender Salamander	San Marcos Salamander	Limestone Salamander	Shasta Salamander	Red Hills Salamander	Larch Mountain Salamander	Jemez Mountains Salamander	Cheat Mountain Salamander	Siskiyou Mountains Salamander		Sardinian or Brown Cave Salamander			Texas Blind Salamander	Grotto Salamander	Olm		Gold-striped Salamander

I U.S.A. R U.S.A. E U.S.A. E U.S.A. E Costa Rica V Mexico, U.S.A. V Guinea, Cote d'Ivoire I India I India	E Mallorca (Spain) R Spain R Corsica (France) Ex? Israel	R U.S.A. I U.S.A.	R Seychelles R N. Island (NZ) R New Zealand R N. Island (NZ)	K Peru
Amargosa Toad Black Toad Houston Toad Golden Toad Sonoran Green Toad Mount Nimba Viviparous Toad Malabar Tree Toad	Mallorcan Midwife Toad Israel Painted Frog	Pine Barrens Tree Frog Illinois Chorus Frog	Seychelles Tree Frog Archey's Frog Hamilton's Frog Hochstetter's Frog	Lake Junin Giant Frog
Family Bufonidae  Bufo boreas nelsoni  Bufo exsul  Bufo houstonensis  Bufo periglenes  Bufo retiformis  Nectophrynoides occidentalis  Pedostibes kempi  Pedostibes tuberculosus	Family Discoglossidae Alytes muletensis Discoglossus jeanneae Discoglossus montalentii Discoglossus nigriventer	Family Hylidae Hyla andersoni Pseudacris streckeri illinoensis Family Hyperoliidae	Tachycnemis seychellensis  Family Leiopelmatidae Leiopelma archeyi Leiopelma hamiltoni Leiopelma hochstetteri	Family Leptodactylidae Batrachonhrynus macrostomus

Order ANURA

R Puerto Rico I Argentina	I India	I Victoria E Australia I Australia	V Italy	V South Africa	V Cameroon, Eq. Guinea R Seychelles K Fiji E U.S.A. V Turkey V Italy, Switzerland, Yugoslavia R Seychelles R Seychelles
Golden Cocqui Frog	Black Microhylid	Baw Baw Frog Conondale Gastric-brooding Frog Eungella Gastric-brooding Frog	Italian Spadefoot Toad	Cape Platanna	Goliath Frog Thomasset's Seychelles Frog Fijian Ground Frog Vegas Valley Leopard Frog Italian Agile Frog Gardiner's Seychelles Frog Seychelles Frog
Eleutherodactylus jasperi Somuncuria somuncurensis	Family Microhylidae Melanobatrachus indicus	Family Myobatrachidae Philoria frosti Rheobatrachus silus Rheobatrachus vitellinus	Family Pelobatidae Pelobates fuscus insubricus	Family Pipidae Xenopus gilli	Family Ranidae Conraua goliath Nesomantis thomasseti Platymantis vitianus Rana fisheri Rana latastei Sooglossus gardineri Sooglossus sechellensis



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# Class CEPHALASPIDOMORPHI

Order PETROMYZONTIFORMES	Family Petromyzontidae	Lampetra hubbsi	Lampetra macrostoma	Lampetra minima	Lampetra tridentata (subspecies)	Mordacia praecox
O	Fa	Lampe	Lampe	Lampe	Lampe	Morda

## Class CHONDRICHTHYES

Order LAMNIFORMES Family Rhincodontidae	Rhincodon typus
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Family Lamnidae Carcharodon carcharias Cetorhinus maximus

Great White Shark

Whale Shark

Basking Shark

## Class OSTEICHTHYES

#### Order COELACANTHIFORMES Family Latimeriidae Latimeria chalumnae

Order ACIPENSERIFORMES
Family Acipenseridae
Acipenser brevirostrum
Acipenser fulvescens
Acipenser oxyrhynchus (subspecies)

Kern Brook Lamprey Lake Lamprey Miller Lake Lamprey Pacific Lamprey Non-parasitic Lamprey

Canada [U.S.A.] U.S.A. Australia

克克歇克克

I Tropical & warm temperate seas

K Sub-tropical & warm temperate seas K Temperate waters

Λ

Coelacanth

Comoros, [South Africa]

Shortnose Sturgeon Lake Sturgeon Atlantic Sturgeon

V Canada, U.S.A. V Canada, U.S.A. V Canada, U.S.A.

Acipenser schrencki	Amur Sturgeon	>	U.S.S.R.
Acipenser sturio	Common Sturgeon	臼	Europe
Huso dauricus	Kaluga	R	U.S.S.R.
Scaphirhynchus albus	Pallid Sturgeon	闰	U.S.A.
Scaphirhynchus sp.	Alabama Sturgeon	臼	U.S.A.
Family Polyodontidae			
Polyodon spathula	Paddlefish	>	U.S.A.
Psephurus gladius	Chinese Paddlefish	>	China
Order OSTEOGLOSSIFORMES			
Family Osteoglossidae			
Arapaima gigas	Pirarucu	X	Amazon Basin
Scieropages formosus	Asian Bonytongue	X	South-east Asia
Family Notopteridae			
Notopterus blanci	Indochina Featherback	H	Cambodia, Thailand
Order CYPRINIFORMES			
Family Cyprinidae			
Acanthorutilus handlirschi	Cicek	闰	Turkey
Aulopyge hugeli	Dalmatian Barbelgudgeon	田	Yugoslavia
Balantiocheilus melanopterus	Silver Shark	Ι	South-east Asia
Barbus andrewi	Cape Whitefish	^	South Africa
Barbus calidus	Clanwilliam Redfin	22	South Africa
Barbus capensis	Clanwilliam Yellowfish	æ	South Africa
Barbus erubescens	Twee River Redfin	^	South Africa
Barbus halei		Η	Malaysia, Thailand
Barbus hospes	Namaquab Barb	<b>K</b>	Namibia, South Africa
Barbus serra	Sawfin	^	South Africa
Barbus somphongsi		Η	Thailand
Barbus tenuis	Slender Redfin	æ	South Africa

Sahrain, Oman Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. South Africa South Africa Philippines Thailand Mexico Mexico] Mexico Mexico Mexico U.S.A.] Mexico Mexico U.S.A. Mexico Mexico U.S.A. Mexico U.S.A. U.S.A. U.S.A. U.S.A. J.S.A. Oman U.S.A. Zaire African Blind Barb Fish Cuatro Cienegas Shiner Sardinita de Rio Verde Sardinita Bocagrande Devil's River Minnow Sardinita Quijarrona Charalito Sonorense Roundnose Minnow Treur River Barb Proserpine Shiner Borax Lake Chub **Sluestripe Shiner** Purquoise Shiner Humpback Chub Seautiful Shiner Sardinita Nazas Conchos Shiner Phicktail Chub Bonytail Chub Mexican Dace Mexican Dace Mexican Dace Border Barb Desert Dace Alvord Chub Blue Shiner Pui Chub Cephalokompsus pachycheilus Dionda episcopa (subspecies) Gila bicolor (subspecies) Chela caeruleostigmata Cyprinella bocagrande Cyprinella callitaenia Cyprinella proserpina Sprinella xanthicara Dionda mandibularis Cyprinella monacha Evarra tlahuacensis Cyprinella panarcys Evarra bustamantei Cyprinella caerulea Caecobarbus geertsi Sprinella formosa Evarra eigenmanni Caecocypris basimi Eremichthys acros Barbus treurensis Dionda dichroma Garra barreimiae Barbus trevelyani Gila crassicauda Gila alvordensis Gila boraxobius Dionda diaboli Garra dunsirei Syprinella sp. Gila ditaenia Gila elegans Gila cypha

Mexico], U.S.A. Mexico], U.S.A. Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. Mexico, U.S.A. South Africa hilippines Sri Lanka U.S.A.] Mexico] Mexico] Mexico J.S.A. J.S.A. U.S.A. J.S.A. Mexico J.S.A. J.S.A. Mexico Mexico U.S.A. U.S.A. U.S.A. J.S.A. U.S.A. J.S.A. J.S.A. ran Little Colorado Spinedace Sardinita de Tepelmene White River Spinedace Sardinita de Rio Verde ahranagat Spinedace Calnwilliam Sandfish Charalito Chihuahua Rio Grande Minnow **Blackmouth Shiner** Rio Grande Shiner Sardinita del Pilon Cape Fear Shiner 7 irgin Spinedace Charalito Saltillo **Sluehead Shiner** Smalleye Shiner Ourango Shiner Roundtail Chub Sturgeon Chub Cahaba Shiner Sicklefin Chub Ameca Shiner Slender Chub Green Labeo Plame Chub Yaqui Chub Moapa Dace Least Chub Gila Chub Spikedace (subspecies) Gila robusta (subspecies) Lepidomeda mollispinis Notropis aguirrepequenoi Totichthys phlegethontis Notropis melanostomus Notropis mekistocholas epidomeda albivallis Mandibularca resinus Hybognathus amarus Hemitremia flammea epidomeda altivelis ranocypris typhlops Lepidomeda vittata Notropis jemezanus Notropis aulidion Notropis moralesi Notropis cahabae Notropis buccula Notropis imeldae Notropis amecae Gila intermedia Hybopsis gelida Notropis hubbsi Hybopsis meeki Moapa coriacea Gila nigrescens Hybopsis cahni Gila purpurea Gila modesta Meda fulgida abeo seeberi abeo fisheri

Mexico, U.S.A.] Mexico], U.S.A. Mexico], U.S.A. South-east Asia South Africa South Africa South Africa Philippines Philippines Philippines Philippines Philippines Philippines Philippines Philippines hilippines Sri Lanka iri Lanka esotho U.S.A. Mexico J.S.A. J.S.A. U.S.A. J.S.A. U.S.A. U.S.A. U.S.A. J.S.A. J.S.A. **Duachita Mountain Shiner** Mountain Blackside Dace Sacramento Splittail Sardinita de Salado Clear Lake Splittail Roughhead Shiner Kanawha Minnow Colorado Squafish Berg River Redfin Sharpnose Shiner Bluntnose Shiner **Burchell's Redfin** Colorless Shiner Bluenose Shiner Phantom Shiner Tennessee Dace Two Spot Barb Maluti Minnow kan Temoleh Oregon Chub Fiery Redfin Noundfin ogonichthys macrolepidotus Pseudobarbus quathlambae Phoxinus cumberlandensis Plagopterus argentissimus Ospatulus palaemophagus Pseudobarbus phlegethon Phoxinus tennesseensis ogonichthys ciscoides seudobarbus burchelli Oregonichthys crameri Phenacobius teretulus Notropis oxyrhynchus Notropis semperasper Notropis perpallidus Ospatulus truncatus Ptychocheilus lucius Dseudobarbus burgi Puntius flavifuscus Notropis saladonis Probarbus jullieni Puntius cataractae Puntius cumingii Notropis snelsoni Puntius clemensi Notropis welaka Puntius baoulan Puntius amarus Notropis simus Puntius asoka Puntius herrei Notropis orca Puntius disa

Canada, Mexico, U.S.A. Mexico], U.S.A. Canada, U.S.A. Philippines Philippines Philippines Philippines Philippines Philippines Philippines Philippines Sri Lanka Sri Lanka Sri Lanka Sri Lanka Sri Lanka Sri Lanka Thailand Mexico] U.S.A.] Turkey U.S.A. U.S.A. apan Japan China China China 田田 Vateria Flower Rasbora Stumptooth Minnow Side Striped Barb Black Ruby Barb Tokyo Bitterling Las Vegas Dace Longnose Dace Speckled Dace Sandhills Chub Spotted Loach Loach Minnow Cherry Barb Relict Dace Ayumodoki Rhinichthys cataractae (subspecies) Rhinichthys osculus (subspecies) Sinocyclocheilus anophthalmus "Nemacheilus" troglocataractus Lepidocephalichthys jonklaasi

Rasbora vaterifloris

Puntius tumba

Relictus solitarius

Rhinichthys deaconi

Puntius nigrofasciatus

Puntius mamalak

Puntius lindong

Puntius lanaoensis

Puntius katalo

Puntius pleurotaenia

Puntius palata

Puntius srilankensis

Puntius titteya Puntius tras

Puntius sirang

Typhdobarbus nudiventris

Tylognathus klatti

Stypodon signifer

Tanakia tanago

Tiaroga cobitis

Semotilis lumbee

Typhlogarra widdowsoni

Family Cobitididae

Family Balitoridae

Leptobotia curta

"Nemacheilus" gejiuensi

Sundoreonectes tiomanensis Nemacheilus" xianggensis Oreonectes anophthalmus Nemacheilus" starostini 'Nemacheilus" smithi Schistura jarutanini Schistura sijuensis Schistura oedipus

## Family Catostomidae

Catostomus bernardini

Catostomus catostomus lacustris atostomus clarki intermedius atostomus dicobolus yarrowi atostomus conchos Catostomus cahita

Catostomus leopoldi

Zatostomus occidentalis lacusanserinus Catostomus rimiculus ssp. atostomus microps

Catostomus santaanae Catostomus sp. Catostomus warnerensis Catostomus wigginsi

Chasmistes brevirostris

Thasmistes liorus mictus Chasmistes liorus liorus Chasmistes cujus

Sycleptus elongatus Chasmistes muriei Deltistes luxatus

lasper Longnose Sucker Zuni Bluehead Sucker Matalote del Bavispe enny Creek Sucker White River Sucker Goose Lake Sucker Matalote Conchos Santa Ana Sucker Shortnose Sucker Matalote Cahita Matalote Opata Narner Sucker Modoc Sucker Salish Sucker Yaqui Sucker June Sucker June Sucker Cui-ui

Snake River Sucker Blue Sucker

Jost River Sucker

Malaysia

Thailand Thailand

**\*\*\*\*\*\*\*** 

ndia

J.S.S.R.

China China Mexico

Canada

Mexico, U.S.A.

Mexico U.S.A.

Mexico U.S.A.

U.S.A. U.S.A. U.S.A.

U.S.A.

Canada

U.S.A. Mexico

U.S.A.

[U.S.A.]

U.S.A.] J.S.A.

Mexico, U.S.A.

Ex [U.S.A.] R U.S.A. R Mexico, U.S.A. R U.S.A. V Canada V U.S.A. E [Mexico], U.S.A.	R Mexico E Brazil V Argentina	E Chile		R Mexico R U.S.A. V U.S.A. V U.S.A. V U.S.A. V U.S.A. V U.S.A.
Harelip Sucker Bigeye Jumprock Blackfin Sucker Gray Redhorse Rustyside Sucker Copper Redhorse Bighead Redhorse	Sardina Ciega Naked Characin	Tollo de Agua Dulce	Bagre del Panuco Bagre Lobo Bagre de Rio Verde	Bagre de Yaqui Bagre de Cuatro Cienegas Smoky Madtom Yellowfin Madtom Carolina Madtom Orangefin Madtom Ouachita Madtom Frecklebelly Madtom Neosho Madtom
Lagochila lacera Moxostoma ariomnumm Moxostoma atripinne Moxostoma congestum Moxostoma hamiltoni Moxostoma sp. Moxostoma sp.	Order CHARACIFORMES Family Characidae Astyanax mexicanus jordani Catabasis acuminatus Gymnocharacinus bergi	Order SILURIFORMES Family Diplomystidae Diplomystes chilensis	Family Ictaluridae Ictalurus australis Ictalurus lupus Ictalurus mexicanus	Ictalurus pricei Ictalurus sp. Noturus baileyi Noturus flavipinnis Noturus gilberti Noturus lachneri Noturus munitus

Widemouth Blindcat Toothless Blindcat Toothless Blindcat Toothless Blindcat Toothless Blindcat  Barnard's Rock-catfish Rock-catfish Rock-catfish Nekogigi Nekogigi Pla Thepa Pla Thepa Cave Catfish Cave Catfish Cave Catfish Aui Ciego	Noturus stanauli Noturus taylori Noturus trautmani Prietella phreatophila	Pygmy Madtom Caddo Madtom Scioto Madtom Barre de Marania	田夕田は	U.S.A. U.S.A. U.S.A.
Barnard's Rock-catfish  Barnard's Rock-catfish  Clanwilliam Rock-catfish  Rock-catfish  Nekogigi  Nekogigi  F E  Giant Catfish  Pla Thepa  Cave Catfish  Cave Catfish  Cave Catfish  Theomati Rock Catlet  V  Sae  Juil Ciego  V	Satan eurystomus	Widemouth Blindcat	₽ >	Mexico U.S.A.
Barnard's Rock-catfish Clanwilliam Rock-catfish Rock-catfish Nekogigi Giant Catfish Pla Thepa Cave Catfish Cave Catfish Cave Catfish Theoreati Rock Catlet  Incomati Rock Catlet V S  A  Juil Ciego V  V  R	Trogloglanis pattersoni	Toothless Blindcat	Λ	U.S.A.
Rock-catfish Nekogigi E Giant Catfish Pla Thepa Cave Catfish Cave Catfish Cave Catfish Cave Catfish Auil Ciego V	Family Bagridae Austroglanis barnardi Austroglanis gilli	Barnard's Rock-catfish Clanwilliam Rock-catfish	田田	South Africa
Giant Catfish Pla Thepa R Cave Catfish Cave Catfish Cave Catfish Le Incomati Rock Catlet V S S Juil Ciego V	Austroglanis sclateri Coreobagrus ichikawai	Rock-catfish Nekogigi	2 年 日	South Africa Japan
cave Catfish dae Incomati Rock Catlet  Juil Ciego	Family Pangasiidae Pangasianodon gigas Pangasius sanihwongsei	Giant Catfish Pla Thepa	V R	Mekong Basin Mekong Basin
cave Catfish Cave Catfish Cave Catfish Ildae  Juil Ciego	Family Sisoridae Oreoglanis siamensis		I	Thailand
idae Incomati Rock Catlet V Juil Ciego V	Family Clariidae Clarias cavernicola Horaglanis krishnai	Cave Catfish Cave Catfish	田出	Namibia India
Juil Ciego	Family Mochokidae Chiloglanis bifurcus	Incomati Rock Catlet	>	South Africa
	Family Pimelodidae Rhamdia reddelli	Juil Ciego	>	Mexico

Order SALMONIFORMES

R U.S.A.	V U.S.A. R Canada, U.S.A.	V Australia, Tasmania Ex [New Zealand]	E Tasmania E Tasmania		V Tasmania V Tasmania	R New Zealand I New Zealand	Ex [Great Lakes (North America)]		E Great Lakes (North America)	freat Lakes (North America)  Ex [Great Lakes (North America)	V Great Lakes (North America)		T Nowth and Baltin Con
Olympic Mudminnow	Delta Smelt Pygmy Smelt	Australian Grayling New Zealand Grayling	Swan Galaxias Clarence Galaxias	Small Pedder Galaxias	Fedder Galaxias Saddled Galaxias	Canterbury Mudfish Black Mudfish	Longiaw Cisco	Cisco	Atlantic Whitefish	Bioater Deepwater Cisco	Kiyi	Blackfin Cisco	Houting
Family Umbridae Novumbra hubbsi	Family Osmeridae Hypomesus transpacificus Osmerus spectrum	Family Retropinnidae Prototroctes maraena Prototroctes oxyrhynchus	Family Galaxiidae Galaxias fontanus Galaxias iohnstoni	Galaxias parvus	Galaxias pedderensis Galaxias tanycephalus	Neochanna burrowsius Neochanna diversus	Family Salmonidae	Coregonus artedii	Coregonus canadensis	Coregonus noyi Coregonus iohannae	Coregonus kiyi	Coregonus nigripinnis	Coregonie overhunchie

Coregonus sp.	Opeongo Whitefish	阳	Canada
Coregonus sp.	Squanga Whitefish	>	Canada
Coregonus zenithicus	Shortjaw Cisco	臼	Great Lakes (North America)
Hucho hucho	Danube Salmon	臼	Danube Basin
Onchorhynchus apache	Apache Trout	>	U.S.A.
Onchorhynchus chrysogaster	Mexican Golden Trout	>	Mexico
Onchorhynchus clarki (subspecies)	Cutthroat Trout	>	U.S.A.
Onchorhynchus gilae	Gila Trout	^	U.S.A.
Onchorhynchus sp.	Trucha de Yaqui	24	Mexico
Salmo platycephalus	Ala Balik	臼	Turkey
Salmothymus obtusirostris	Adriatic Salmon	闰	Yugoslavia
Salvelinus agassizi	Silver Trout	ΞX	[U.S.A.]
Salvelinus anaktuvukensis	Angayukaksurak Char	ద	U.S.A.
Salvelinus confluentus	Bull Trout	R	Canada, U.S.A.
Stenodus leucichthys leucichthys	Beloribitsa	>	U.S.S.R.
Order PERCOPSIFORMES Family Amblyonsidae			
Amblyopsis rosae	Ozark Cavefish	>	U.S.A.
Amblyopsis spelaea	Northern Cavefish	>	U.S.A.
Speoplatyrhinus poulsoni	Alabama Cavefish	臼	U.S.A.
Order OPHIDIIFORMES Family Ophidiidae			
Typhliasina pearsei	Dama Ciega Blanca	团	Mexico
Typhliasina sp.	Nueva Dama Ciega	臼	Mexico
Order CYPRINODONTIFORMES			
Nothobranchius sp.	Caprivi Killifish	臼	Namibia

n R Brazil sh V Brazil sh E Brazil ish I Brazil arlfish E Brazil Ifish R U.S.A. ante R Mexico	minnow  Ex [U.S.A.]  R U.S.A.  V Mexico  U.S.A.  tro Cienegas  E Mexico	hcarp E Spain	Guayacon de San Gregorio  Amistad Gambusia  Guayacon Bocon  Big Bend Gambusia  San Marcos Gambusia  Clear Creek Gambusia  Guayacon de Hacienda Dolores  Pecos Gambusia  V Mexico  Wexico  V Mexico  V Mexico  V Mexico  Claysacon Pinto  Rexico  V Mexico  Rexico  V Mexico
Family Rivulidae  Cynolebias boitonei  Cynolebias constanciae  Cynolebias marmoratus  Cynolebias minimus  Cynolebias opalescens  Cynolebias splendens  Cynolebias splendens  Cynolebias splendens  Rivulus marmoratus  Rivulus Almirante	Family Fundulidae  Fundulus albolineatus  Fundulus julisia  Fundulus lima  Fundulus waccamensis  Fundulus waccamensis  Eudulus waccamensis	Family Valenciidae Valencia hispanica	Family Poeciliidae Gambusia alvarezi Gambusia amistadensis Gambusia eurystoma Gambusia gaigei Gambusia georgei Gambusia heterochir Gambusia hurtadoi Gambusia longispinis Gambusia nobilis Gambusia senilis Gambusia

Micropanchax schoelleri Poecilia latipunctata Poecilia sulphuraria Poeciliopsis occidentalis Priapella bonita Xiphophorus clemenciae Xiphophorus gordoni Xiphophorus meyeri	Molly del Tamesi Molly del Teapa Charalito Guayacon Ojiazul Espada de Clemencia Platy Monterrey Platy Cuatro Cienegas	T > > K K K K K K K K K K K K K K K K K	Egypt Mexico Mexico Mexico, U.S.A. [Mexico] Mexico Mexico Mexico Mexico
Family Goodeidae			
Allotoca maculata	Opal Goodeid	臼	Mexico
Ameca splendens	Goodeid	囙	Mexico
Ataeniobius toweri	Striped Goodeid	田	Mexico
Characodon audax	Bold Characodon	>	Mexico
Characodon garmani	Parras Characodon	EX.	[Mexico]
Characodon lateralis	Rainbow Goodeid	团	Mexico
Crenichthys baileyi (subspecies)	White River Springfish	>	U.S.A.
Crenichthys nevadae	Railroad Valley Springfish	>	U.S.A.
Empetrichthys latos concavus	Raycraft Ranch Poolfish	Εx	[U.S.A.]
Empetrichthys latos latos	Pahrump Poolfish	闰	U.S.A.
Empetrichthys latos pahrump	Pahrump Ranch Poolfish	Ĕ	[U.S.A.]
Empetrichthys merriami	Ash Meadows Killifish	Ex	[U.S.A.]
Girardinichthys multiradiatus		田	Mexico
Girardinichthys viviparus	Mexclapique	囝	Mexico
Goodea gracilis		>	Mexico
Hubbsina turneri		臼	Mexico
Skiffia francesae	Tiro	臼	Mexico
Xenoophorus captivus	Solo Goodeido	闰	Mexico
Family Cyprinodontidae			
Campellolebias brucei	Santa Catarina Sabrefin	臼	Brazil

		,	
Cualac tessellatus	Cachorrito de Media Luna	Ŧ	Mexico
Cyprinodon alvarezi	Perrito de Potosi	团	Mexico
Cyprinodon atrorus	Perrito del Bolson	æ	Mexico
Cyprinodon beltrani	Cachorrito Lodero	>	Mexico
Cyprinodon bifasciatus	Perrito de Cuatro Cienegas	24	Mexico
Cyprinodon bovinus	Leon Springs Pupfish	臼	U.S.A.
Cyprinodon diabolis	Devils Hole Pupfish	>	U.S.A.
Cyprinodon elegans	Comanche Springs Pupfish	臼	U.S.A.
Cyprinodon eximius (subspecies)	Conchos Pupfish	>	Mexico, U.S.A.
Cyprinodon fontinalis	Perrito de Carbonera	臼	Mexico
Cyprinodon labiosus	Cachorrito Cangrejero	<b>&gt;</b>	Mexico
Cyprinodon latifasciatus	Perrito de Parras	Ex	[Mexico]
Cyprinodon macrolepis	Largescale Pupfish	>	Mexico
Cyprinodon macularius (subspecies)	Desert Pupfish	囶	Mexico, U.S.A.
Cyprinodon maya	Cachorrito Gigante	^	Mexico
Cyprinodon meeki	Cachorrito de Mezquital	闰	Mexico
Cyprinodon nazas	Cachorrito del Aguanaval	^	Mexico
Cyprinodon nevadensis (subspecies)	Amargosa Pupfish	>	U.S.A.
Cyprinodon pachycephalus	Cachorrito Cabezon	떨	Mexico
Cyprinodon pecosensis	Pecos Pupfish	Λ	U.S.A.
Cyprinodon radiosus	Owens Pupfish	妇	U.S.A.
Cyprinodon salinus milleri	Cottonball Marsh Pupfish	ద	U.S.A.
Cyprinodon salinus salinus	Salt Creek Pupfish	24	U.S.A.
Cyprinodon simus	Cachorrito Boxeador	^	Mexico
Cyprinodon spp.	Perritos de Sandia	Ex?	Mexico
Cyprinodon tularosa	White Sands Pupfish	24	U.S.A.
Cyprinodon verecundus	Cachorrito de Dorsal Larga	Λ	Mexico
Kosswigichthys asquamatus	Scaleless Killifish	Λ	Turkey
Megupsilon aporus	Cachorrito Enano de Potosi	闰	Mexico
Orestias cuvieri		凶	Bolivia

<b>TES</b>	idae
NIFORM	ichthyidae
0	Adriani
er BEI	
Orde	Family

Xenopoecilus sarasinorum Xenopoecilus oophorus Adrianichthys kruyti Xenopoecilus poptae

#### Family Oryziidae

Oryzias orthognathus Oryzias profundicola Oryzias marmoratus Oryzias matanensis Oryzias nigrimas

## Family Hemiramphidae

Dermogenys megarramphus Nomoramphus celebensis Dermogenys weberi

# Order ATHERINIFORMES

Family Atherinidae Menidia conchorum Chirostoma bartoni Poblana alchichica Poblana ferdebueni Chirostoma regani Poblana letholepis Poblana squamata Menidia extensa

Egg-carrying Buntingi Duck-billed Buntingi Popta's Buntingi

Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia)

田田田田田

Sharp-jawed Buntingi Black Buntingi

Poso Halfbeak

Charal del Valle de Mexico Charal de la Caldera

Waccamaw Silverside Key Silverside

Charal de Alchichica

Charal de la Preciosa Charal de Quechulac

Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia) Sulawesi (Indonesia)

Sulawesi (Indonesia)

Sulawesi (Indonesia) Sulawesi (Indonesia)

Sulawesi (Indonesia)

Mexico

Mexico U.S.A.

Mexico

Mexico Mexico

Mexico

Rainbowfish V Australia e V Australia	I Malaysia	V Sulawesi (Indonesia)	R	Santa Ana Stickleback Unarmored Threespine Stickleback Giant Stickleback V Canada Enos Stickleback V Canada	se V South Africa V South Africa
Lake Eacham Rainbowfish Honey Blue-eye			Celebes Rainbow		Knysna Seahorse River Pipefish
Family Melanotaeniidae Melanotaenia eachamensis Pseudomugil mellis	Family Phallostethidae Phallostethus dunckeri	Family Telmatherinidae Paratherina cyanea Paratherina labiosa Paratherina striata Paratherina wolterecki Telmatherina abendanoni	Telmatherina bonti Telmatherina celebensis Telmatherina ladigesi	Order GASTEROSTEIFORMES Family Gasterosteidae Gasterosteus aculeatus santaeannae Gasterosteus aculeatus williamsoni Gasterosteus sp. Gasterosteus sp.	Order SYNGNATHIFORMES Family Syngnathidae Hippocampus capensis Syngnathus watermayeri

Order SYNBRANCHIFORMES Family Synbranchidae Ophisternon candidum Ophisternon infernale	Blind Cave Eel Anguila Ciega	H EI	Australia Mexico
Order SCORPAENIFORMES			
Cottus asperrimus	Rough Sculpin	22	U.S.A.
Cottus echinatus	Utah Lake Sculpin	Ä	[U.S.A.]
Cottus extensus	Bear Lake Sculpin	<b>3</b>	U.S.A.
Cottus greenei	Shoshone Sculpin	Λ	U.S.A.
Cottus leiopomus	Wood River Sculpin	23	U.S.A.
Cottus princeps	Klamath Lake Sculpin	R	U.S.A.
Cottus pygmaeus	Pygmy Sculpin	臼	U.S.A.
Cottus tenuis	Slender Sculpin	24	U.S.A.
Myoxocephalus quadricornis	Fourhorn Sculpin	>	Canada
Order PERCIFORMES Family Percichthyidae			
Maccullochella ikei	Eastern Freshwater Cod	臼	Australia
Maccullochella macquariensis	Trout Cod	Ħ	Australia
Maccullochella sp.	Mary River Cod	н	Australia
Family Centrarchidae			
Ambloplites cavifrons	Roanoke Bass	ద	U.S.A.
Elassoma boehlkei	Carolina Pygmy Sunfish	R	U.S.A.
Elassoma okatie	Bluebarred Pygmy Sunfish	R	U.S.A.
Elassoma sp.	Spring Pygmy Sunfish	^	U.S.A.
Lepomis megalotis spp.	Mojarra de Cuatro Cienegas	24	Mexico
Micropterus notius	Suwannee Bass	R	U.S.A.
Micropterus salmoides ssp.	Robalo de Cuatro Cienegas	23	Mexico

Micropterus treculi	Guadalupe Bass	24	U.S.A.
Family Percidae			
Ammocrypta asprella	Crystal Darter	23	U.S.A.
Ammocrypta pellucida	Eastern Sand Darter	>	Canada, U.S.A.
Etheostoma acuticeps	Sharphead Darter	路	U.S.A.
Etheostoma aquali	Coppercheek Darter	^	U.S.A.
Etheostoma australe	Dardo de Conchos	田	Mexico
Etheostoma boschungi	Slackwater Darter	>	U.S.A.
Etheostoma cinereum	Ashy Darter	æ	U.S.A.
Etheostoma cragini	Arkansas Darter	24	U.S.A.
Etheostoma ditrema	Coldwater Darter	>	U.S.A.
Etheostoma fonticola	Fountain Darter	臼	U.S.A.
Etheostoma grahami	Rio Grande Darter	24	Mexico, U.S.A.
Etheostoma kanawhae	Kanawha Darter	23	U.S.A.
Etheostoma luteovinctum	Redband Darter	23	U.S.A.
Etheostoma maculatum	Spotted Darter	œ	U.S.A.
Etheostoma mariae	Pinewoods Darter	ద	U.S.A.
Etheostoma moorei	Yellowcheek Darter	>	U.S.A.
Etheostoma nianguae	Niangua Darter	Λ	U.S.A.
Etheostoma nuchale	Watercress Darter	田	U.S.A.
Etheostoma okaloosae	Okaloosa Darter	^	U.S.A.
Etheostoma osburni	Finescale Saddled Darter	짪	U.S.A.
Etheostoma pallididorsum	Paleback Darter	>	U.S.A.
Etheostoma pottsi	Mexican Darter	>	Mexico
Etheostoma rubrum	Bayou Darter	^	U.S.A.
Etheostoma sellare	Maryland Darter	凶	U.S.A.
Etheostoma sp.	Dardo de Cuatro Cienegas	臼	Mexico
Etheostoma striatulum	Striated Darter	æ	U.S.A.
Etheostoma trisella	Trispot Darter	>	U.S.A.
Etheostoma tuscumbia	Tuscumbia Darter	Λ	U.S.A.
Etheostoma wapiti	Boulder Darter	>	U.S.A.

Perca schrenki	Balkhash Perch	24	U.S.S.R.	
Percina antesella	Amber Darter	臼	U.S.A.	
Percina aurolineata	Goldline Darter	>	U.S.A.	
Percina burtoni	Blotchside Logperch	H	U.S.A.	
Percina cymatotaenia	Bluestripe Darter	æ	U.S.A.	
Percina jenkinsi	Conasauga Logperch	闰	U.S.A.	
Percina lenticula	Freckled Darter	>	U.S.A.	
Percina macrocephala	Longhead Darter	>	U.S.A.	
Percina nasuta	Longnose Darter	>	U.S.A.	
Percina pantherina	Leopard Darter	>	U.S.A.	
Percina rex	Roanoke Logperch	田	U.S.A.	
Percina tanasi	Snail Darter	>	U.S.A.	
Percina uranidea	Stargazing Darter	R	U.S.A.	
Romanichthys valsanicola	Asprete	闰	Romania	
Zingel asper	Asper	田	Rhone Basin	
Zingel streber	Streber	^	Danube Basin	
Family Sciaenidae				
Totoaba macdonaldi	Totoaba	Œ	Mexico	
Romily Cioblidoo				
rainny cicinidae		1		
Astatotilapia brevis	Orange-fringed Largemouth	<b>H</b>	South Africa	
Cichlasoma bartoni	Mojarra Caracolera	臼	Mexico	
Cichlasoma labridens	Mojarra	闰	Mexico	
Cichlasoma minckleyi	Mojarra Caracolera de Cuatro Cienegas	臼	Mexico	
Cichlasoma pantostictum	Mojarra	R	Mexico	
Cichlasoma sp.	Mojarra Caracolera de Media Luna	띰	Mexico	
Cichlasoma steindachneri	Mojarra	H	Mexico	
Cichlasoma urophtalmus ericymba	Mojarra de Bulha	田	Mexico	
Konia dikume	Dikume	>	Cameroon	
Konia eisentrauti	Konye	>	Cameroon	

Oreschomic alcalisms grahami	Lake Magadi Tilania	- Δ	Kontra
Pungu maclareni	Pungu	<b>*</b> >	Cameroon
Sarotherodon caroli	Fissi	^	Cameroon
Sarotherodon linnellii	Unga	Λ	Cameroon
Sarotherodon lohbergeri	Leka Keppe	^	Cameroon
Sarotherodon steinbachi	Kululu	Λ	Cameroon
Serranochromis meridianus	Lowveld Largemouth	23	South Africa
Stomatepia mariae	Nsess	>	Cameroon
Stomatepia mongo	Mongo	>	Cameroon
Stomatepia pindu	Pindu	Λ	Cameroon
Tilapia guinasana	Otjikoto Tilapia	四	Namibia
haplochromine spp. (c. 250 spp.)	Lake Victoria Cichlids	E	East Africa
α.	Lake Victoria Cichlids	ম	East Africa
Family Embiotocidae Hysterocarpus traski pomo	Russian River Tule Perch	R	U.S.A.
Family Mugilidae Myxus capensis	Freshwater Mullet	æ	South Africa
Family Eleotrididae			
Eleotris sandwicensis	Oopu	24	U.S.A.
Hypseleotris dayi	Golden Sleeper	R	South Africa
Mogurnda n.sp.	Flinders Gudgeon	^	Australia
Family Gobiidae			
Awaous stamineus	Oopu Nakea	23	U.S.A.
Chlamydogobius n.sp.	Elizabeth Springs Goby	>	Australia
Croilia mossambica	Burrowing Goby	H	South Africa
Economidichthys trichonis		24	Greece
Eucyclogobius newberryi	Tidewater Goby	23	U.S.A.
Glossogobius intermedius		Λ	Sulawesi (Indonesia)

Glossogobius matanensis		>	Sulawesi (Indonesia)
Knipowitschia punctatissima		ĸ	Greece
Knipowitschia thessala		臼	Greece
Lentipes concolor	Oopu Alamoo	>	U.S.A.
Mistichthys luzonensis	Sinarapan	>	Philippines
Mugilogobius latifrons		>	Sulawesi (Indonesia)
Mugilogobius n.sp.		>	Sulawesi (Indonesia)
Padogobius nigricans		>	Greece
Redigobius dewaali	Checked Goby	ĸ	Mozambique, South Africa
Sicydium stimpsoni	Oopu Nopili	ద	U.S.A.
Silhouettea sibayi	Sibayi Goby	跖	South Africa
Stupidogobius flavipinnis		>	Sulawesi (Indonesia)
Taenioides jacksoni	Bearded Goby	>	South Africa
Tamanka sarasinorum	Sarasin's Goby	>	Sulawesi (Indonesia)
Weberogobius amadi	Poso Bungu	团	Sulawesi (Indonesia)
Family Anabantidae	Eastern Province Rocky	>	South Africa
מתוחבונות מחווים וו	Constitution of the control of the c	•	
Family Belontudae Belontia signata	Combtail	R	Sri Lanka
Malpulutta kretseri	Ornate Paradisefish	>	Sri Lanka

		,

INVERTEBRATES Other than Insects

# Class POLYHYMENOPHOREA

Order HETEROTRICHIDA Family Stentoridae Stentor introversus

Order GORGONACEA Family Plexauridae Eunicella verrucosa Order HELIPORACEA Family Coralliidae Corallium (20 species)

Family Edwardsiidae Order ACTINARIA Nematostella vectensis Edwardsia ivellii

Anthipathidae (c 150 species) Order ANTIPATHARIA Family Anthipathidae

### Class TURBELLARIA

Romankenkius pedderensis Order TRICLADIDA Sphalloplana holsingeri Family Kenkiidae Sphalloplana subtilis Kenkia rhynchida

Phylum CILIOPHORA

Phylum CNIDARIA Tartar's Stentor

U.S.A.

M

Broad Sea Fan

Mediterranean Sea, N.E. Atlantic Ocean

M

Mediterranean Sea, Pacific Ocean

IJ

Precious Corals

Starlet Sea Anemone Ivell's Sea Anemone

Black Coral

Caribbean, Indo-Pacific

IJ

U.K. U.K., North America

Ex?

# Phylum PLATYHELMINTHES

Tasmania U.S.A. 日日日 Holsinger's Groundwater Planarian Bigger's Groundwater Planarian

Malheur Cave Planarian Lake Pedder Planarian

U.S.A. U.S.A.

#### Class ENOPLA

Order HOPLONEMERTEA Katechonemertes nightingaleensis Family Prosorhochmidae Leptonemertes chalicophora Argonemertes australiensis Pantinonemertes agricola Antiponemertes allisonae Pantinonemertes enalios Dantinonemertes winsori Geonemertes rodericana Argonemertes stocki Argonemertes hillii

## Phylum MOLLUSCA

Madeira, Azores, Canary Is (Spain)

**3ermuda** 

Australia

Australia

Tristan da Cunha

**张宪珉张珉珉**及攻

Rodrigues

Australia

New Zealand

Australia Australia

> Order GYMNOSOMATA Family Corambidae Doridella batava

Class BIVALVIA

Order PTERIOIDA Pinctada margaritifera Family Pteriidae Pinctada maxima

Black-lipped Pearl Oyster Gold-lipped Pearl Oyster

Indo-Pacific らら

Indo-Pacific

Netherlands

M

Zuiderzee Doridella Sea Slug

#### Order UNIONOIDA

Family Unionidae		1	
Alasmidonta arcula		<b>→</b> ⊦	U.S.A.
Alasmidonta atropurpurea	Comment of the Jan Manager	<b>⊣</b> [±	U.Ö.A.
Alasmidonta heterodon	Dwari weuge mussei	9 6	4 5 1
Alasmidonta raveneliana		<b>១</b>	U.D.A.
Alasmidonta robusta		ΣÌ,	U.S.A.
Alasmidonta wrightiana		ı	U.S.A.
Arkansia wheeleri	Wheeler's Pearly Mussel	凶	U.S.A.
Canthyria collina	James River Spiny Mussel	>	U.S.A.
Canthyria spinosa	Georgia Spiny Mussel	Н	U.S.A.
Carunculina pulla	Savannah Shore Mussel	24	U.S.A.
Conradilla caelata	Birdwing Pearly Mussel	凶	U.S.A.
Cyprogenia aberti	Western Fan-shell Pearly Mussel	臼	U.S.A.
Cyprogenia irrorata	Eastern Fan-shell Pearly Mussel	_	U.S.A.
Cyrtonaias tampicoensis tecomatensis	Tampico Pearly Mussel	臼	Mexico
Dromus dromas	Dromedary Pearly Mussel	回	U.S.A.
Elliptio marsupiobesa	Cape Fear Spike Pearly Mussel	П	U.S.A.
Elliptio nigella	Recovery Pearly Mussel	Ex	[U.S.A.]
Elliptio sp.	Waccamaw Lake Pearly Mussel	H	U.S.A.
Elliptio spinosa	Georgia Spiny Mussel	æ	U.S.A.
Elliptio steinstansana	Tar River Spiny Mussel	凶	U.S.A.
Elliptio waccamawensis	Waccamaw Spike	R	U.S.A.
Epioblasma arcaeformis	Arc-form Pearly Mussell	Ex?	U.S.A.
Epioblasma biemarginata		EX	[U.S.A.]
Epioblasma brevidens		闰	U.S.A.
Epioblasma capsaeformis		臼	U.S.A.
Epioblasma curtisi		н	U.S.A.
Epioblasma flexuosa	Arcuate Pearly Mussel	Ex	[U.S.A.]
Epioblasma florentina curtisi	Curtis Pearly Mussel	Ex?	U.S.A.
Epioblasma florentina florentina	Yellow-blossom Pearly Mussel	臼	U.S.A.

E U.S.A.	Ex [U.S.A.]						_	Ex [U.S.A.]		_	Ex [U.S.A.]	E U.S.A.					V U.S.A.	E U.S.A.	E U.S.A.	I U.S.A.	E U.S.A.	,	E U.S.A.	Ex? U.S.A.		E U.S.A.		E U.S.A.		E U.S.A.	I U.S.A.	E U.S.A.
Acorn Pearly Mussel	Lefevre's Pearly Mussel	Stone's Dearly Muscal	T - 1- D1- Mineson	Lewis Pearly Mussel		Southern Acorn Riffle Shell	Penitent Mussel	Fine-rayed Pearly Mussel	Nearby Pearly Mussel	Sampson's Pearly Mussel	Steward's Pearly Mussel	White Cat's Paw Mussel	Purple Cat's Paw Mussel	Green-blossom Pearly Mussel	Tan-blossom Pearly Mussel	Tubercled-blossom Pearly Mussel	Snuffbox	Turgid-blossom Pearly Mussel	Tan Riffle Shell Mussel	Virginia Spiny Mussel	Fine-rayed Pigtoe Pearly Mussel	Shiny Pigtoe Pearly Mussel	Cracking Pearly Mussel			Higgin's Eye Pearly Mussel		Pink Mucket Pearly Mussel		Neosho Pearly Mussel		Alabama Lamp Pearly Mussel
Enioblasma havsiana	Enichlasma lefanoi	Epitotiasma referier	Epicolasma tentor	Epioblasma lewisi	Epioblasma metastriata	Epioblasma othealoogensis	Epioblasma penita	Epioblasma personata	Epioblasma propingua	Enioblasma sampsoni	Eniohlasma stewardsoni	Epioblasma sulcata delicata	Epioblasma sulcata sulcata	Epioblasma torulosa gubernaculum	Enioblasma torulosa rangiana	Epioblasma torulosa torulosa	Enioblasma triauetra	Enioblasma turgidula	Epioblasma walkeri	Fusconaia collina	Fusconaia cuneolus	Fusconaia edgariana	Hemistena lata	Lampsilis dolabraeformis	Lampsilis fasciola	Lampsilis higginsi	Lampsilis hostonia	Lampsilis orbiculata	Lampsilis perovalis	Lampsilis rafinesqueana	Lampsilis streckeri	Lampsilis nirescens

Lasmigona holstonia		Ι	U.S.A.	
Leptodea leptodon	Scale Shell	H	U.S.A.	
Lexingtonia dolabelloides	Slab-sided Pearly Mussel	Ι	U.S.A.	
Megalonaias nicklineana	Nicklin's Pearly Mussel	闰	Mexico	
Microcondylaea compressa		Ι	Southern Europe	ā
Obovaria retusa	Golf Stick Pearly Mussel	H	U.S.A.	
Pegias fabula	Little Winged Pearly Mussel	闰	U.S.A.	
Plectomeris dombeyana		Ex	[U.S.A.]	
Plethobasus cicatricosus	White Warty Back Pearly Mussel	田	U.S.A.	
Plethobasus cooperianus	Cumberland Pigtoe	臼	U.S.A.	
Pleurobema clava	Northern Club Shell	H	U.S.A.	
Pleurobema curtum	Curtus's Mussel	囶	U.S.A.	
Pleurobema marshalli	Marshall's Mussel	臼	U.S.A.	
Pleurobema oviforme		H	U.S.A.	
Pleurobema plenum	Rough Pigtoe Pearly Mussel	臼	U.S.A.	
Pleurobema rubrum		Η	U.S.A.	
Pleurobema taitianum	Judge Tait's Mussel	臼	U.S.A.	
Potamilus capax	Fat Pocketbook	臼	U.S.A.	
Potamilus inflatus		Ι	U.S.A.	
Quadrula cylindrica strigillata	Rough Rabbit's Foot Pearly Mussel	H	U.S.A.	
Quadrula fragosa	Rough Maple Leaf Pearly Mussel	EX	[U.S.A.]	
Quadrula intermedia	Cumberland Monkey Face Pearly Mussel	M	U.S.A.	
Quadrula sparsa	Appalachian Monkey Face Pearly Mussel	臼	U.S.A.	
Quadrula stapes	Stirrup Shell	臼	U.S.A.	
Simponaia ambigua		Ι	U.S.A.	
Simpsoniconcha ambigua	Salamander Mussel	Ι	U.S.A.	
Toxolasma cylindrella	Pale Lilliput Pearly Mussel	臼	U.S.A.	
Unio crassus		>	Central & Northern Europe	nern Europe
Unio elongatulus		Π	Southern Europe	Ð
Villosa choctawensis	Choctaw Pearly Mussel	н	U.S.A.	
Villosa fabalis	Bean Mussel	н	U.S.A.	
Villosa ortmanni	Ortmann's Pearly Mussel	æ	U.S.A.	

I U.S.A. E U.S.A.	<ul> <li>I U.S.A.</li> <li>V Catalonia (Spain)</li> <li>V Europe, North America</li> <li>I U.S.A.</li> </ul>	I Indo-Pacific I Indo-Pacific K Indo-Pacific V Indo-Pacific V Indo-Pacific K Indo-Pacific I Indo-Pacific	I U.S.A. I Tasmania	CT Ind. Dovigo	
Fine-rayed Purple Pearly Mussel Cumberland Bean Pearly Mussel	Spectacle Case Pearly Mussel Spengler's Freshwater Mussel Freshwater Pearl Mussel Alabama Pearl Shell	Horse's Hoof Clam China Clam Crocus Clam Southern Giant Clam Giant Clam Small Giant Clam Scaly Clam		Green Sneil	
Villosa purpurea Villosa trabalis	Family Margaritiferidae Cumberlandia monodonta Margaritifera auricularia Margaritifera margaritifera Margaritifera marrianae	Order VENEROIDA Family Tridacnidae Hippopus hippopus Hippopus porcellanus Tridacna crocea Tridacna derasa Tridacna gigas Tridacna maxima Tridacna squamosa	Family Pisidiidae Pisidium ultramontanum Family Hyriidae Velesunio moretonicus	Class GASTROPODA Order ARCHAEOGASTROPODA Family Turbinidae	Family Neritidae Neritilia hawaiiensis

Order MESOGASTROPODA			
Family Valvatidae Valvata utahensis	Utah Roundmouth Snail	<b>}</b> 1	U.S.A.
Family Pomatiasidae Pomatias raricosta		>	Tenerife (Canary Is, Spain)
Family Hydrobiidae	St George Snail	Н	U.S.A.
Aphaostracon asthenes	Blue Spring Aphaostracon	нн	U.S.A. U.S.A.
Aphaostracon monds Aphaostracon nyanus	Compact Hydrobe Snail	н	U.S.A.
Aphaostracon xynoelictus	Fenney's Spring Hydrobe Snail	<b></b>	U.S.A.
Arganiella exilis		- H	France Belgium, France, Netherlands
Aventonia brois Belgrandiella pyrenaica		<b>⊢</b>	France
Bythinella bicarinata		- F	France
Bythinella carinulata		<b>-</b>	France, Switzerland
Bythinella reyniesi Bythinella reyniesii		н 1	Austria, France
Bythinella vesontiana		<b>⊢</b> ⊢	France
Bythinella viridis		<b>-</b>	France
Bythiospeum bressanum		Ι	France
Bythiospeum diaphanum		<b></b> 1	France, Switzerland
Bythiospeum garnieri		<b>-</b> -	France
Cincinnatia helicogyra	Helicoid Spring Snail	<b>-</b> -	U.S.A.
Cincinnatia mica	Sand Grain Snail	<b>→ ⊢</b>	U.S.A.
Cincinnatia monroensis	Enterprise Spring Snau	<b>→</b> ⊢	L.S.A.
Cincinnatia parva Cincinnatia ponderosa	Ponderous Spring Snail	4 <b>14</b>	U.S.A.

Cincinnatia vanhyningi	Seminole Spring Snail	I U.S.A.
Cincinnatia wekiwae	Wekiwa Spring Snail	I U.S.A.
Coahuilix hubbsi	Coahuilix de Hubbs Snail	V Mexico
Cochliopa texana	Phantom Cave Snail	I U.S.A.
Cochliopina milleri	Miller's Snail	V Mexico
Coxiella striata		I Tasmania
Durangonella coahuilae	Durangonella de Coahuila Snail	V Mexico
Fissuria boui		I France
Fluminicola avernalis	Muddy Valley Turban Snail	I U.S.A.
Fluminicola erythopoma	Point of Rocks Spring Snail	E U.S.A.
Fluminicola merriami	Pahranagat Valley Turban Snail	I U.S.A.
Fluminicola robusta	Elk Island Snail	I U.S.A.
Fluminicola sp. (3 species)		I U.S.A.
Fontelicella micrococcus	Amargosa Fontelicella	I U.S.A.
Fontelicella neomexicana	Socorro Spring Snail	Ex? U.S.A.
Fontelicella robusta		I U.S.A.
Fontelicella robusta walkeri		I U.S.A.
Fontelicella sp. a	Roswell Fontelicella	V U.S.A.
Fontelicella sp. b (2 species)		I U.S.A.
Glacidorbis pawpela		I Tasmania
Glacidorbis pedderi		I Tasmania
Hauffenia minuta		I France, Switzerland
Hydrobia scamandri		I France
Lithoglyphus columbiana	Giant Columbia River Spire Snail	E U.S.A.
Litthabitella elliptica		I France
Marstonia agarhecta		I U.S.A.
Marstonia castor		I U.S.A.
Marstonia ogmoraphe	Obese Marstonia Snail	I U.S.A.
Marstonia pachyta	Thick-shelled Marstonia Snail	I U.S.A.
Mexipyrgus carranzae	Mexipyrgus de Carranza Snail	V Mexico
Mexipyrgus churinceanus	Mexipyrgus de Churince Snail	V Mexico
Mexipyrgus escobedae	Mexipyrgus de Escobeda Snail	V Mexico

Maximum 1.100:	Mexiporgus de Lugo Snail	^	Mexico	
Mentyleus tugot	Mexiporgus de West El Mojarral Snail	>	Mexico	
Mening multiportus	Mexiporgus de East El Mojarral Snail	>	Mexico	
Mexipy gus munitineums	Mexithauma de Cienegas Snail	^	Mexico	
Mettinguine quantiformation		I	France	
Moitessieria Juvenisanguis Moitessieria lineolata		I	France	
Moitessieria Incordi		Ι	France	
Moitessieria nuteana		П	France	
Moitessieria parana		П	France	
Mortes esperior rolandiana		Ι	France	
Mortossieria simoniana		Ι	France	
Mumphonilus minoblesi	Nymphophilus de Minckley Snail	>	Mexico	
Polocanthilhionsis memierii	4 4 3	н	France	
Paladilhia nleurotoma		I	France	
Daladilhionis houraignati		Ι	France	
Paludiscala caramba	Paludiscala de Oro Snail	Λ	Mexico	
Planieveria conilis		Н	France	
Pseudomnicola anteisensis		Ι	France	
Pseudamnicola klemmi		П	France	
Som atopyrus cafanotus		I	U.S.A.	
Somotodaries normalias		H	U.S.A.	
Sometodyrus tenar		Ι	U.S.A.	
Stobia nana		H	U.S.A.	
Trionia cheatumi	Cheatum's Snail	Н	U.S.A.	
Trionia elathrata	White River Snail	H	U.S.A.	
Trionia imitator	California Brackish Water Snail	I	U.S.A.	
Training of (Renovies)		П	U.S.A.	
Tijonia insp. (o species)				
Family Assimineidae	Badwater Spail	H	U.S.A.	
Assiminea sp.	Pecos Assiminea Snail	^	U.S.A.	
*				

Family Aciculidae Platyla foliniana Pana houranianationa	Renea gormonti	Renea moutonii	Renea paillona	Renea singularis
Fa Platyl	Renea	Renea	Renea	Renea

France France France France France France

Family Pleuroceridae	Apella alabamensis Apella babylonia	Athearni anthonyi	Athearni crassa	Elimia albanyensis	Goniobasis albanyensis	Io arwigera arwigera	Io fluvialis	Leptoxis crassa	Leptoxis praerosa	Leptoxis subumbilicata	Lithasia armigera	Lithasia duttoniana	Lithasia geniculata	Lithasia jayana	Lithasia lima	Lithasia salebrosa	Lithasia verrucosa
Fam	Apella al Apella bo	Athearni	Athearni	Elimia a	Goniobas	Io arwige	Io fluvia	Leptoxis	Leptoxis	Leptoxis	Lithasia	Lithasia	Lithasia	Lithasia	Lithasia	Lithasia	Tithogia

Family Fleuroceridae ella alabamensis	Alabama Coosa Slit-shell
ella babylonia	Babylon Coosa Slit-shell
hearni anthonyi	Anthony's River Snail
hearni crassa	Crass River Snail
imia albanyensis	
oniobasis albanyensis	Albany River Snail
arwigera arwigera	
fluvialis	Spiny River Snail
ptoxis crassa	
ptoxis praerosa	Mainstream River Snaul
ptoxis subumbilicata	:
thasia armigera	Armigerous River Snail
thasia duttoniana	Dutton's River Snail
thasia geniculata	Geniculate River Snail
thasia jayana	Jay's River Snail
thasia lima	Elk River File Snail
thasia salebrosa	Rugged River Snail
thasia verrucosa	Verrucose File Snail

Ex [U.S.A.] Ex [U.S.A.] Ex [U.S.A.] I U.S.A.	1 U.S.A. I U.S.A. E. 11.8.A.	V U.S.A.	Ex [U.S.A.]	I U.S.A. I U.S.A.	I U.S.A. E U.S.A.		E U.S.A. I U.S.A.	CT Caribbean
Alabama Coosa Slit-shell Babylon Coosa Slit-shell Anthony's River Snail Crass River Snail	Albany River Snail	Spiny River Snail	Mainstream River Snail	Armigerous River Snail Dutton's River Snail	Geniculate River Snail	Elk River File Snail	Rugged River Snail Verrucose File Snail	Queen Conch

Family Strombidae

Strombus gigas

Family Cymatidae	Triton's Trumat	<u>α</u>	Indo Dooifio	
Charonia illionis		4	INTO-I SCHILL	
Order BASOMMATOPHORA				
Lymnaea kingii	Utah Band Snail	I	U.S.A.	
Myxas glutinosa	Glutinous Snail	Λ	Europe	
Stagnicola pilsbryi	Fish Springs Pond Snail	I	U.S.A.	
Family Lancidae				
Fisherola nuttalli	Giant Columbia River Limpet	I	U.S.A.	
Family Physidae				
Physa sp.	Snake River Physa Snail	>	U.S.A.	
Physa spelunca	Wyoming Cave Snail	П	U.S.A.	
Physa utahensis	Utah Bubble Snail	Ι	U.S.A.	
Physa virgata		Ι	U.S.A.	
Physa zioni	Zion Canyon Snail	П	U.S.A.	
Stenophysa microstriata	Fish Lake Snail	Π	U.S.A.	
Family Planorbidae				
Ancylastrum cumingianus	Tasmanian Freshwater 'Limpet'	臼	Tasmania	
Helisoma jacksonense	Jackson Lake Snail	Н	U.S.A.	
Helisoma magnificum	Cape Fear Ramshorn Snail	I	U.S.A.	
Segmentina nitida	Shiny Ram's-Horn	>	Europe	
Taphius eucosmius eucosmius	Greenfield Ramshorn Snail	н	U.S.A.	
Order STYLOMMATOPHORA				
Family Achatinellidae				
Achatinella a (41 species)	22 species Little Agate Shells	Ex	[Hawaii, (U.S.A.)]	
	19 species Little Agate Shells	臼	Hawaii (U.S.A.)	

Partulina splendida Partulina montagui Partulina fusoidea Partulina confusa Perdicella kuhnsi Partulina perdix Partulina crassa

Hawaii (U.S.A.)]

Hawaii (U.S.A.)

Hawaii (U.S.A.)

Ex ► Ex

[Hawaii (U.S.A.)]

Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)

#### Family Partulidae

Samoana abbreviata Samoana diaphana Samoana solitaria Partula mooreana Partula tohiveana Samoana fragilis Partula langfordi Partula mirabilis Partula radiolata Partula suturalis Partula aurantia Partula salifana Partula taeniata Partula exigua Partula gibba Partula hebe

## Family Cochlicopidae

Cryptazeca subcylindrica Cryptazeca monodonta Hypnophila remyi

Moorean Viviparous Tree Snail Moorean Viviparous Tree Snail Tree Snail

Moorean Viviparious Tree Snai Moorean Viviparous Tree Snail Short Samoan Tree Snail Tree Snail Tree Snail Tree Snail

Moorea (Society Is)] Moorea (Society Isl Mariana Is (U.S.A.) Guam (U.S.A.) Guam (U.S.A.) Guam (U.S.A.) Society Is EX.

Moorea (Society Is)]

American Samoa Society Is

Juam (U.S.A.) Society Is Pyrenees (France & Spain) France

Corsica (France)

Family Amastridae	elia (all species)	ıanumia sp.
Fa	Carelio	Thaan

# Family Chondrinidae

Chondrina megacheilos caziotana Leiostyla abbreviata Leiostyla cassida Leiostyla corneocostata Leiostyla gibba Leiostyla lamellosa Solatopupa cianensis Solatopupa guidoni Solatopupa psarolena Sterkia clementina

#### Family Vertiginidae

Truncatellina arcyensis Vertigo alabamensis Vertigo angustior Vertigo genesii Vertigo hebardi Vertigo nebardi

#### Family Enidae

Napaeus badiosus Napaeus nanodes Napaeus propinguus Napaeus roccellicola Napaeus tarnerianus

Snail	Snail	Snail	Snail	Snail
Land	Land	Land	Land	Land
Madeiran Land Snail				

San Clemente Island Blunt-top Snail

Narrow-mouthed Whorl Snail Round-mouthed Whorl Snail

Des Moulin's Snail

Ex [Hawaii (U.S.A.)] Ex? Hawaii (U.S.A.) I France
V Madeira (Portugal)
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France U.S.A.

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V Tenerife (Canary Is, Spain)
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R Tenerife (Canary Is, Spain)

V Tenerife (Canary Is, Spain)	V Europe France France	V Europe I U.S.A. V U.S.A.	V South Africa	<ul> <li>V New Zealand</li> </ul>	E Tasmania	<ul><li>E Galapagos Is (Ecuador)</li><li>V U.S.A.</li><li>V New Zealand</li></ul>
	Tree Snail	Sandbowl Snail Kanab Amber Snail Chittenango Ovate Amber Snail	Plant's Gulella Snail	Kauri Amber Snail	Granulated Tasmanian Snail	Stock Island Tree Snail
Napaeus variatus	Family Clausiliidae Balea perversa Laminifera pauli Macrogastra lineolata euzieriana	Family Succineidae Catinella arenaria Oxyloma haydeni kanabensis Succinea chittenangoensis	Family Streptaxidae Gulella plantii	Family Rhytididae Paryphanta busbyi Paryphanta compta Paryphanta fletcheri Paryphanta gilliesi Paryphanta hochstetteri Paryphanta lignaria Paryphanta trawersi	Family Acavidae Anoglypta launcestonensis	Family Bulimulidae Bulimulus (31 endemic species) Orthalicus reses Placostylus ambagiosus

V New Zealand V New Zealand		V Ireland, Spain, Fortugal V U.S.A.		E U.S.A. I U.S.A. D Tomonife (Concert Is Spein)			V Tenerife (Canary Is, Spain)	Ex [France] V Tenerife (Canary Is, Spain)	I American Samoa	I U.S.A. I U.S.A. I France
Flav Snail	Slug Snail	Kerry Slug Painted Snake-coiled Forest Snail	Madeiran Land Snail	Iowa Pleistocene Snail					Mount Matafao Different Snail	
Placostylus bollonsi	Fiacostytus nongu Family Arionidae Binneya notabilis	Geomalacus maculosus Family Endodontidae	Angutspira picia Discus defloratus Discus guerinianus	Discus macclintocki Discus marmorensis	Discus scutula Helicodiscus diadema	Helicodiscus hexodon Thaumatodon hystricelloides	Family Limacidae Malacolimax wiktori	Family Parmacellidae Parmacella gervaisi Parmacella tenerifensis	Family Helicarionidae Diastole matafaoi	Family Zonitidae Glyphyalinia pecki Paravitrea clappi Vitrea pseudotrolli

I U.S.A.	V Tenerife (Canary Is, Spain) V Tenerife (Canary Is, Spain) V Tenerife (Canary Is, Spain) W Madeira (Portugal) V Madeira (Portugal) I France V Madeira (Portugal)
California McCoy Snail Rocky Coast Snail Indian Yosemite Snail Trinity Bristle Snail	Madeiran Land Snail Madeiran Land Snail Madeiran Land Snail Madeiran Land Snail Madeiran Land Snail Cima Discula Madeiran Land Snail Roman Snail
Micrarionta rowelli bakerensis Micrarionta rowelli mccoiana Monadenia circumcarinata Monadenia fidelis minor Monadenia fidelis pronotis Monadenia hillebrandi yosemitensis Monadenia hirsutis Monadenia mormonum buttoni Monadenia mormonum hirsuta Monadenia selosci Monadenia setosa Monadenia troglodytes Sonorella metcalfi	Family Hygromidae Canariella fortunata Canariella leprosa Canariella pthonera Family Helicidae Caseolus calculus Caseolus sophaerula Cyrnotheba corsica Discula leacockiana Discula tabellata Discula testudinalis Discula turricula Geomitra moniziana Helix pomatia

V Madeira (Portugal) I U.S.A. V Tenerife (Canary Is, Spain) V Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain) E Tenerife (Canary Is, Spain) V Tenerife (Canary Is, Spain) V France I France I France R Tenerife (Canary Is, Spain)	R France, Spain		K Pacific		I Europe
Madeiran Land Snail	Escargot de Quimper	Phylum ANNELIDA	Palolo Worm		Medicinal leech
Helix subplicata Helix tryoni Hemicycla adansoni Hemicycla inutilis Hemicycla mascaensis Hemicycla modesta Hemicycla plicaria Hemicycla pouchet Macularia saintyvesi Trissexodon constrictus Xerotricha nubivaga	Family Elonidae	Class POLYCHAETA	Order EUNICIDA Family Eunicidae Eunice viridis	Class HIRUDINOIDEA	Order ARHYNCHOBDELLAE Family Hirudinidae Hirudo medicinalis

### Class OLIGOCHAETA

Order HAPLOTAXIDA Family Komarekionidae Komarekiona eatoni	
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Family Lutodrilidae Lutodrilus multivesiculatus Family Microchaetidae Microchaetus (33 species) Tritogenia (5 species)

Family Megascolecidae
Megascolides americanus
Megascolides australis
Megascolides macelfreshi

Family Acanthodrilidae
Chilota (13 species)
Diplotrema (16 species)
Microscolex (9 species)
Udeina (59 species)

Lesotho, South Africa

Southern African Acanthodriline Earthworms

Earthworm	>	U.S.A.
	Ħ	U.S.A.
South African Giant Earthworm South African Giant Earthworm	>>	South Africa South Africa
Washington Giant Earthworm Giant Gippsland Earthworm Oregon Giant Earthworm	되 > 되	U.S.A. Australia U.S.A.
Southern African Acanthodriline Earthworms Southern African Acanthodriline Earthworms Southern African Acanthodriline Earthworms	>>>	South Africa South Africa Lesotho, South Africa

#### Phylum ARTHROPODA Subphylum CHELICERATA

Class MEROSTOMATA

Coastal waters - Japan to Indonesia Atlantic coast of North America Coastal waters - Japan to Indonesia Coastal waters - Japan to Indonesia		Mexico	Spain, Morocco Crete (Greece)	U.S.A.	U.S.A.	Europe	Yugoslavia
***		K	<b>N</b> I	H	H	H	æ
Horseshoe Crabs		Red-kneed Tarantula		Torreya Trap-door Spider	Santa Cruz Teleman Spider	Ladybird Spider	Kocevje Subterranean Spider
Order XIPHOSURA Family Limulidae Carcinoscorpius rotundicauda Limulus polyphemus Tachypleus gigas Tachypleus tridentatus	Class ARACHNIDA	Order ARANEAE Family Theraphosidae Brachypelma smithi	Family Dipluridae Macrothele calpeiana Macrothele cretica	Family Ctenizidae Cyclocosmia torreya	Family Telemidae Telema (whole genus)	Family Eresidae Eresus niger	Family Linyphiidae Troglohyphantes gracilis

Troglohyphantes similis Troglohyphantes spinipes	Kocevje Subterranean Spider Kocevje Subterranean Spider	요요	Yugoslavia Yugoslavia
Family Araneidae Meta dolloff	Dolloff Cave Spider	I	U.S.A.
Family Gnaphosidae Cesonia irvingi	Key Gnaphosid Spider	Ι	Bahamas, U.S.A.
Family Lycosidae Adelocosa anops Lycosa ericeticola	No-eyed Big-eyed Wolf Spider Rosemary Wolf Spider	田日	U.S.A. U.S.A.
Pardosa diuturna Sosippus placidus	Glacier Bay Wolf Spider Lake Placid Funnel Wolf Spider	er in	U.S.A.
Family Asauridae Dolomedes plantarius	Great Raft Spider	>	Northern Europe
Order PSEUDOSCORPIONIDA Family Neobisiidae Microcreagnis imperialis	Empire Cave Pseudoscorpion	I	U.S.A.
Order OPILIONES Family Phalangodidae Banksula melones	Melones Cave Harvestman	>	U.S.A.

# Subphylum CRUSTACEA

#### Order ANASPIDACEA Family Anaspidae Class CRUSTACEA

Allanaspides helonomus Allanaspides hickmani Paranaspides lacustris Anaspides tasmaniae Anaspides spinulae

## Family Koonungidae

Micraspides calmani Koonunga cursor

## Family Psammaspidae

Eucrenonaspides oinotheke Order THORACICA Family Balanidae

Armatobalanus nefrens

Balanus aquila

#### Family Branchinectidae Order ANOSTRACA

Branchinecta paludosa Branchinecta gigas

Giant Fairy Shrimp Fairy Shrimp

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Tasmanian Anaspid Crustacean				
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anian A				
Tasm	Tasm	Tasm	Tasm	Tasm

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Western North America

Czechoslovakia

K Mexico K Mexico K Mexico K Mexico E U.S.A.	V U.K.	V U.S.A. I Netherlands K Mexico K Mexico K Mexico K Mexico	I Tasmania	I U.S.A.	I U.S.A. I U.S.A. I U.S.A.	I Mexico
Socorro Isopod		Madison Cave Isopod		Clifton Cave Isopod Bat Cave Isopod	Nickajack Cave Isopod Rye Cove Cave Isopod Lee County Cave Isopod	
Family Sphaeromatidae Thermosphaeroma dugesi Thermosphaeroma milleri Thermosphaeroma smithi Thermosphaeroma subequalum Thermosphaeroma thermophilum	Family Trichoniscidae Metatrichoniscoides celticus	Family Cirolanidae Antrolana lira Arubolana imula Mexilana saluposi Speocirolana affinis Speocirolana interstitialis Speocirolana thermydromis	Family Armadillidae Echinodillo cavaticus	Family Asellidae Caecidotea barri Caecidotea macropoda	Caecidotea nickajackensis Lirceus culveri Lirceus usdagalun	Family Stenasellidae Mexistenasellus coahuila

Order ISOPODA

R Mexico	I Tasmania	I Tasmania	I Tasmania I Tasmania I Tasmania I Tasmania	A 211 1	I	I poc	od I U.S.A.		H	₩ •	d L.S.A.	· H	H		pod I U.S.A.	
Parzefall's Stenasellid Wilken's Stenasellid				Loridan A sun Simon in the fact of the second	Oklahoma Cave Amphipod	Pennsylvania Cave Amphipod	Florida Cave Amphipod	Tidewater Interstitial Amphipod	Arizona Cave Amphipod	Balcones Cave Amphipod	Barr's Cave Amphipod Bifurcated Cave Amphinod	Bowman's Cave Amphipod	Clanton's Cave Amphipod	Burnsville Cove Cave Amphipod	Cooper's Cave Amphipod	
Mexistenasellus parzefalli Mexistenasellus wilkensi	Family Styloniscidae Styloniscus sp.	Family Scyphacidae Haloniscus searlei	Family Phreatoicidae Mesacanthotelson setosis Onchotelson brevicaudatus Onchotelson spatulatus Uramphisopus pearsoni	Order AMPHIPODA Family Crangonyctidae	Allocrangonyx hubricht Allocrangonyx pellucidus	Crangonyx dearolfi	Crangonyx grandimanus	Crangonyx nooosi Stygobromus araeus	Stygobromus arizonensis	Stygobromus balconius	Stygobromus barri	Stygooromus orjurcatus	Stypohomus clantoni	Stygobromus conradi	Stygobromus cooperi	- J

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Stygobromus elatus	Elevated Spring Amphipod	-	U.S.A.
Stygobromus emarginatus	Greenbrier Cave Amphipod	I	U.S.A.
Stygobromus ephemerus	Ephemeral Cave Amphipod	Ι	U.S.A.
Stygobromus flagellatus	Ezell's Cave Amphipod	Ι	U.S.A.
Stygobromus gradyi	Grady's Cave Amphipod	Ι	U.S.A.
Stygobromus hadenoecus	Devil's Sinkhole Amphipod	H	U.S.A.
Stygobromus harai	Hara's Cave Amphipod	H	U.S.A.
Stygobromus hayi	Hay's Spring Amphipod	Ι	U.S.A.
Stygobromus heteropodus	Pickle Springs Amphipod	H	U.S.A.
Stygobromus hubbsi	Malheur Cave Amphipod	Н	U.S.A.
Stygobromus identatus	Tidewater Stygonectid Amphipod	Н	U.S.A.
Stygobromus longipes	Long-legged Cave Amphipod	Ι	U.S.A.
Stygobromus lucifugus	Rubious Cave Amphipod	Ex	[U.S.A.]
Stygobromus mackenziei	Mackenzie's Cave Amphipod	Ι	U.S.A.
Stygobromus montanus	Mountain Cave Amphipod	H	U.S.A.
Stygobromus morrisoni	Morrison's Cave Amphipod	Η	U.S.A.
Stygobromus mundas	Bath County Cave Amphipod	Ι	U.S.A.
Stygobromus nortoni	Norton's Cave Amphipod	I	U.S.A.
Stygobromus onondagaensis	Onondaga Cave Amphipod	П	U.S.A.
Stygobromus ozarkensis	Ozark Cave Amphipod	Н	U.S.A.
Stygobromus parvus	Minute Cave Amphipod	Ι	U.S.A.
Stygobromus pecki	Peck's Cave Amphipod	H	U.S.A.
Stygobromus pizzinii	Pizzini's Amphipod	H	U.S.A.
Stygobromus putealis	Wisconsin Well Amphipod	Ι	U.S.A.
Stygobromus reddelli	Reddell's Cave Amphipod	Η	U.S.A.
Stygobromus smithii	Alabama Well Amphipod	П	U.S.A.
Stygobromus spinatus	Spring Cave Amphipod	<b></b>	U.S.A.
Stygobromus stellmacki	Stellmack's Cave Amphipod	H	U.S.A.
Stygobromus subtilis	Subtle Cave Amphipod	Ι	U.S.A.
Stygobromus wengerorum	Wengeror's Cave Amphipod	П	U.S.A.

Family Gammaridae

Gammarus acheronytes

Gammarus hyalieioides

Gammarus pecos

Gammarus bousfieldi Gammarus desperatus Family Orchestiidae

Spelasorchestia koloana

Order DECAPODA

Family Astacidae

I U.S.A. I U.S.A. I U.S.A. I U.S.A. I U.S.A.	I Hawaii (U.S.A.)	V Europe R Europe K Europe V U.S.A. Ex? U.S.A.	I U.S.A. E U.S.A. I Puerto Rico	I U.S.A.	I Madagascar I Tasmania V Tasmania R West Australia
Illinois Cave Amphipod Bousfield's Amphipod Noel's Amphipod Diminutive Amphipod Pecos Amphipod	Kaui Cave Amphipod	Noble Crayfish White-clawed Crayfish Shasta Crayfish	Alabama Cave Shrimp California Freshwater Shrimp Mona Cave Shrimp	Mono Lake Brine Shrimp	Madagascar Freshwater Crayfish Giant Freshwater Crayfish

Austropotamobius torrentium

Pacifastacus nigrescens

Pacifastacus fortis

Palaemonias alabamae

Syncaris pacifica Typhlatya monae

Family Atyidae

Austropotamobius pallipes

Astacus astacus

Astacoides madagascariensis

Astacopsis franklinii

Cherax crassimanus

Astacopsis gouldi

Family Parastacidae

Family Artemidae

Artermia monica

R West Australia	R Indo-Pacific	I U.S.A. I U.S.A.	I U.S.A. I U.S.A.		E U.S.A. I U.S.A. E U.S.A.		I U.S.A. V U.S.A.	CT Caribbean CT New Zealand CT Caribbean CT Indo-Pacific	K U.S.A.
	Coconut Crab	Big South Fork Cravfish	Greensboro Burrowing Crayfish New River Riffle Cravfish	Chickamanga Crayfish Obey Crayfish	Louisville Crayfish Nashville Crayfish	Orlando Cave Crayfish Pee Dee Idic Crayfish	Texas Cave Shrimp Florida Cave Shrimp	Spiny Lobster Rock Lobster Spotted Spiny Lobster Spiny Lobster	California Bay Pea Crab
Engaewa subcoerulea	Family Coenobitidae Birgus latro	Family Cambaridae Cambarus batchi Cambarus bouchardi	Cambarus catagius Cambarus chasmodactylus	Cambarus extraneus Cambarus obeyensis	Cambarus zophonastes Orconectes jeffersoni Orconectes shoupi	Procambarus acherontis Procambarus connus Procambarus lepiclocdactylus	Family Palaemonidae Palaemonetes antrorum Palaemonetes cummingi	Family Palinuridae Anulirus argus Jasus edwardsii Panulirus guttatus Panulirus penicillatus	Family Pinnotheridae Parapinnixa affinis

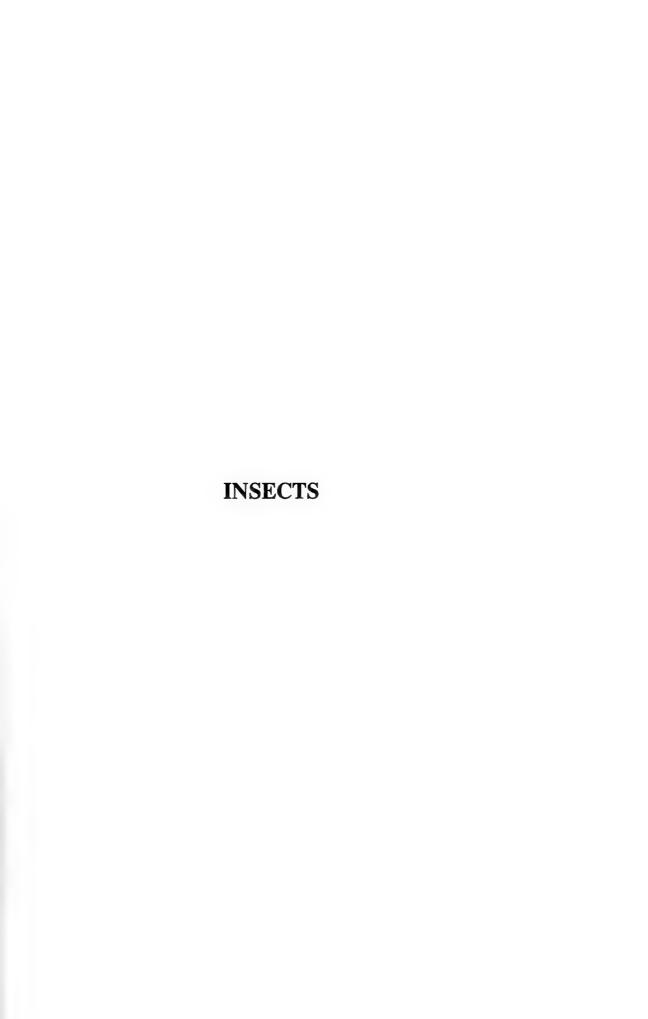
# Family Nephropidae

Homarus americanus Homarus gammarus Nephrops norvegicus

American Lobster European Lobster Norway Lobster

North Atlantic North-east Atlantic North-east Atlantic ಕಕಕ

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# Subphylum UNIRAMIA

#### Class INSECTA

Order THYSANURA	Family Machilidae	Machiloides heteropus	Machiloides perkinsi
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Nomersleymeria n.sp. "iresoni" Acanthanura n.sp. "mesibovi" Order COLLEMBOLA Family Neanuridae Womersleymeria bicornis Megalanura tasmaniae Acanthanura dendyi

#### Order EPHEMEROPTERA Tasmanophlebia lacus-coerulei Family Siphlonuridae Acanthometropus pecatonica Isonychia diversa Ameletus falsus

Family Baetidae

Family Oligoneuridae Heterocleon berneri

Homoeoneuria cahabensis Homoeoneuria dolani

Hawaii (U.S.A.)	Hawaii (U.S.A.)	
Ι	H	
Hawaiian Long-palp Bristletail	Perkin's Club-palp Bristletail	

Tasmania	Tasmania	Tasmania	Tasmania	Tasmania	Tasmania	
I	H	Н	Н	Н	I	

y Ex [U.S.A.]	I U.S.A.	I U.S.A.	ly Australia
Pecatonica River Mayfly	False Mayfly	Diverse Mayfly	Large Blue Lake Mayfly

U.S.A.	U.S.A.
П	Ι
Berner's Two-winged Mayfly	Cahaba Sand-filtering Mayfly

U.S.A.	U.S.A.
Н	Н

Blackwater Sand-filtering Mayfly

Womersleymeria n.sp. "zachariae"

U.S.A.	U.S.A.	U.S.A. U.S.A. [U.S.A.]	U.S.A. U.S.A. U.S.A.	U.S.A.	Belize, El Salvador, Guatemala, Honduras, Mexico	U.S.A. Jordan, Syria, Turkey Guatemala, Mexico	South Africa
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Meridion Blackwater Mayfly	American Sand-burrowing Mayfly	Colorado Burrowing Mayfly West Virginia Burrowing Mayfly Robust Burrowing Mayfly	Frison's Mayfly Spicluose Mayfly Argo Mayfly	Yellow Mayfly			
Family Heptageniidae Pseudirion meridionalis	Family Behningiidae Dolania americana	Family Ephemeridae Ephemera compar Ephemera triplex Pantagenia robusta	Family Ephemerellidae Ceratella frisoni Ceratella spiculosa Ephemerella argo	Family Caenidae Brachycercus flavus	Order ODONATA Family Amphipterygidae Amphipteryx agrioides	Family Calopterygidae Calopteryx angustipennis Calopteryx syriaca Hetaerina rudis	Family Chlorolestidae Chlorolestes draconicus

Ecchlorolestes nylephtha Ecchlorolestes perengueyi Phylolestes ethelae

# Family Megapodagrionidae

Amanipodagrion gilliesi Heteragrion eboratum Heteragrion tricellulare Hypolestes clara Hypolestes trinitatis Paraphlebia zoe Thaumatoneura inopinata

## Family Hemiphlebiidae

Hemiphlebia mirabilis

# Family Coenagrionidae

Aciagrion rarum
Argiagrion leoninum
Argiocnemis solitaria
Argiocnemis umbargae
Ceriagrion mourae
Coenagrion hylas freyi
Coenagrion mercuriale
Enallagma camerunense
Enallagma recurvatum

Frey's Damselfly Southern Damselfly Barrens Bluet Damselfly
San Francisco Forktail Damselfly
Adytum Damselfly
Fallax Damselfly
Pele Damselfly

Megalagrion amaurodytum fallax Megalagrion amaurodytum peles

Megalagrion adytum

Ischnura gemina

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Tanzania

Guatemala, Honduras

Guatemala, Mexico

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Australia

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I Angola

I Sierra Leone

E Mauritius

Cameroon

E Austria, F.R.G., Switzerland

V Europe

I Tropical Africa

I South Africa

E U.S.A.

U.S.A.

Hawaii (U.S.A.)

Hawaii (U.S.A.) Hawaii (U.S.A.)

Nigrohamatum Damselfly Orange-black Damselfly septodemas Damselfly Slackline Damselfly Waianae Damselfly Oceanic Damselfly Pacific Damselfly Oahu Damselfy Megalagrion amaurodytum waianaeanum Seychellibasis alluaudi alluaudi Family Platycnemididae seudagrion quadrioculatum Megalagrion nigrohamatum Megalagrion nigrolineatum Megalagrion xanthomelas Megalagrion leptodemas Platycnemis mauriciana Megalagrion oceanicum Megalagrion pacificum Megalagrion jugorum Vehalennia pallidula Megalagrion oahense Mortonagrion hirosei Metacnemis angusta

### Family Platystictidae

Palaemnema reventazoni Palaemnema chiriquita Palaemnema gigantula Palaemnema paulicoba Palaemnema melanota

## Family Protoneuridae

Nososticta pilbara

Family Pseudostigmatidae Mecistogaster pronoti Mecistogaster asticta

Jugorum Melalagrion Damselfly

Hawaii (U.S.A	Hawaii (U.S.A.	Japan	U.S.A.	Zaire	Seychelles								
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South Africa	Mauritius
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India, Nepal

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#### Family Aeshnidae

Acanthaeshna victoria Aeshna meruensis Aeshna persephone Aeshna viridis Aeshna williamsoniana Cephalaeschna acutifrons

#### Family Gomphidae

Burmagomphus sivalikensis Erpetogomphus lampropeltis Antipodogomphus hodgkini Cornigomphus guineensis Diaphlebia pallidistylus Epigomphus verticornis Epigomphus subsimilis Gomphurus consanguis Gomphurus ozarkensis Arigomphus maxwelli Epigomphus crepidus Gomphurus modestus Epigomphus clavatus Epigomphus paulsoni Epigomphus camelus Gomphus diminutus Gomphurus lynnae Gomphus flavipes Gomphus graslini Gomphus hodgesi

	24	Tanzania
	23	U.S.A.
	Н	Europe to Siberia
	H	Mexico
	^	India
	24	Australia
	R	U.S.A.
	Λ	India
	Ι	Tropical Africa
		Costa Rica
	Н	Costa Rica
	I	Guatemala
	-	Mexico
	-	Mexico
	I	Costa Rica
	I	Costa Rica
	X	U.S.A.
Cherokee Clubtail Dragonfly	잼	U.S.A.
)	P	ITEA

North Palaearctic France, Spain

U.S.A.

U.S.A. U.S.A. U.S.A.

I U.S.A. R U.S.A. R U.S.A. R U.S.A. R Australia I Madagascar R Turkey, U.S.S.R. E Israel, Jordan, Turkey R U.S.A. V Rastern North America	Ex? U.S.A.	V U.S.A. R U.S.A. I U.S.A. R Egypt, Niger	R U.S.A. I Mexico V U.S.A. R U.S.A.	I Tasmania K Australia
Tennessee Clubtail Dragonfly Septima's Clubtail Dragonfly Sandhills Clubtail Dragonfly Twin-Striped Clubtail	Grune Keiljungter Edmund's Snaketail Dragonfly	Howe's Midget Snaketail Dragonfly Alleghany Snaketail Dragonfly	Belle's Sand Clubtail Yellow-sided Clubtail Bronze Clubtail Dragonfly	
Gomphus sandrius Gomphus septima Hylogomphus carolinus Hylogomphus geminatus Hylogomphus parvidens Ictinogomphus dobsoni Isomma hieroglyphicum Onychogomphus assimilis Onychogomphus acuminatus	Ophiogomphus cecilia Ophiogomphus edmundo	Ophiogomphus howei Ophiogomphus incurvatus Ophiogomphus incurvatus alleghaniensis Paragomphus sinaiticus	Progomphus bellei Progomphus risi Stylurus potulentus Stylurus townesi	Family Neopetaliidae Archipetalia auriculata Family Petaluridae Petalura pulcherrima

Turkey, U.S.S.R.

臼

Family Cordulegasteridae Cordulegaster mzymtae

Florida Spiketail Dragonfly	E U.S.A.
	I New Zealand R Australia I Madagascar R U.S.A.
Shining Macromia Dragonfly Wabash Belted Skimmer Dragonfly Apalichicola Twilite Skimmer Dragonfly	
Orange-spotted Emerald Calverts' Emerald	V North Africa, West Europe R Canada R U.S.A.
Ohio Emerald Dragonffy	E U.S.A. R. Fastern North America
Big Thicket Emerald Dragonfly	
Banded Bog Skimmer Dragonfly	V U.S.A.
Purple Chaser	K Congo K Sierra Leone K Tropical Africa E Israel, Turkey, Iraq I Guinea-Bissau K Zaire Mozambique, Zimbabwe I Europe, West Siberia I Europe, West Siberia E Japan K U.S.A.
ng M chicc ge-sp Eme ed B	facromia Dragonfly selted Skimmer Dragonfly la Twilite Skimmer Dragonfly sotted Emerald rald Dragonfly et Emerald Dragonfly og Skimmer Dragonfly asser

Monardithemis flava		^	Angola, Zambia
Orthetrum poecilops miyajimaense		<b>R</b>	Japan
Orthetrum rubens		Λ	South Africa
Palpopleura albifrons		H	Gabon
Sympetrum dilatatum		Ex?	St Helena
Trithomis hartmisi		Н	Eq. Guinea
Trithemis nigra		H	Principe
Trothemis luciona		>	South Africa
כן סוונפוונים נתרושות		- 1	T-4
Urothemis thomasi		4	Lastern Arabia
Order BLATTAKIA			
Family Blattidae		,	i
Aspiduchus cavernicola	Tuna Cave Koach	<b>T</b>	Puerto Rico
Order MANTODEA			
Family Mantidae			
Apteromantis aptera		时	Spain
Order GRYLLOBLATTARIA			
Family Grylloblattidae			
Grylloblatta chirurgica	Mount St. Helens' Grylloblattid	>	U.S.A.
		•	
Order ORTHOPTERA			
Family Stenopelmatidae			
Ammopelmatus kelsoensis	Kelso Jerusalem Cricket	H	U.S.A.
Ammopelmatus muwu	Port Conception Jerusalem Cricket	н	U.S.A.
Deinacrida carinata	Herekopare Island Weta	>	New Zealand
Deinacrida fallai	Poor Knights Weta	>	New Zealand
Deinacrida heteracantha	Wetapunga	>	New Zealand
Deingerida rugasa	Stenhens Island Weta	Λ	New Zealand
Deinacrida tihiosnina		- —	New Zealand
Stenonelmatus cahuilgensis	Coachella Vallev Jerusalem Cricket	r <b>I</b>	U.S.A.
Children commercial	Comment and the manner of the comment	•	

I U.S.A.	I U.S.A. I U.S.A. I U.S.A. I U.S.A. I Tasmania I U.S.A.	V Spain  I Hawaii (U.S.A.)  I U.S.A. I U.S.A. I Hawaii (U.S.A.) I U.S.A. Ex [U.S.A.] I U.S.A. V Southern Europe	I U.S.A.	I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.) I U.S.A. I Hawaii (U.S.A.) I U.S.A. I Hawaii (U.S.A.)
Navajo Jerusalem Cricket	Arizona Giant Sand Treader Cricket Kelso Giant Sand Treader Cricket Coachelia Giant Sand Treader Cricket Samwell Cave Cricket Tanner's Black Camel Cricket	Nihoa Banza Conehead Katydid Big Pine Key Conehead Katydid Keys Short-winged Conehead Katydid Remote Conehead Katydid Middlekauf's Shieldback Katydid Antioch Dunes Shieldback Katydid Santa Monica Shieldback Katydid Predatory Bush Cricket	Prairie Mole Cricket	Howarth's Cave Cricket Schauinsland's Bush Cricket Kaumana Cave Cricket Keys Scaly Cricket Oahu Deceptor Bush Cricket Laricis Tree Cricket
Stenopelmatus navajo	Family Rhaphidophoridae Daihinibaenetes arizonensis Macrobaenetes kelsoensis Macrobaenetes valgum Pristoceuthophilus sp. Tasmanoplectron isolatum Utabaenetes tanneri	Family Tettigoniidae Baetica ustulata Banza nihoae Belocephalus micanopy Belocephalus sleighti Conocephaloides remotus Idiostatus middlekaufi Neduba extincta Neduba longipennis Saga pedo	Family Gryllotalpidae Gryllotalpa major	Family Gryllidae Caconemobius howarthi Caconemobius schauinslandi Caconemobius varius Cycloptilum irregularis Leptogryllus deceptor Oecanthus laricis Thaumatogryllus cavicola

I Hawaii (U.S.A.)	I U.S.A. I U.S.A.	I U.S.A. I Tasmania I U.S.A. I U.S.A.	I U.S.A. I U.S.A.	Ex [Lord Howe I. (Australia)]	E St Helena	I U.S.A. I U.S.A.	I Tasmania
Kauai Thin-footed Bush Cricket	Pinaleno Monkey Grasshopper Desert Monkey Grasshopper	Idaho Point-headed Grasshopper Michigan Bog Grasshopper Siskiyou Chloealtis Grasshopper	Sierra Pygmy Grasshopper Torreya Pygmy Grasshopper	Lord Howe Island Stick-insect	St Helena Earwig	Meltwater Stonefly Wahkeena Falls Flightless Stonefly	
Thaumatogryllus variegatus	Family Eumastacidae Eumorsea pinaleno Psychomastix deserticola	Family Acrididae Acrolophitus pulchellus Appalachia arcena Calliptamus baiulus Chloaeltis aspasma Spharagemon superbum	Family Tetrigidae Tetrix sierrana Tettigidea empedonepia	Order PHASMATOPTERA Family Phasmatidae Dryococelus australis	Order DERMAPTERA Family Labiduridae Labidura herculeana	Order PLECOPTERA Family Nemouridae Lednia tumana Nemours wahkeena	Family Notonemouridae Kimminsoperla biloba

Kimminsoperla williamsi		н	Tasmania
Family Capniidae Capnia lacustra	Lake Tahoe Benthic Stonefly	н	U.S.A.
Family Leuctridae Leuctra szczytkoi	Schoolhouse Springs Stoneffy	н	U.S.A.
Family Taeniopterygidae Taeniopteryx starki	Leon River Stonefly	н	U.S.A.
Family Perlidae Beloneuria georgiana Beloneuria jamesae Hansonoperla appalachia	Georgia Stonefly Cheaha Stonefly Hanson's Appalachian Stonefly	ппп	U.S.A. U.S.A. U.S.A.
Family Chloroperlidae Alloperla roberti	Robert's Stonefly	E X	[U.S.A.]
Family Peltoperlidae Soliperla fenderi	Fender's Stonefly	H	U.S.A.
Family Eustheniidae Eusthenia nothofagi Eusthenia reticulata	Otway Stonefly	闰口	Australia Tasmania
Family Gripopterygidae Leptoperla cacuminis Riekoperla darlingtoni	Mount Kosciusko Wingless Stonefly Mount Donna Buang Wingless Stonefly	<b>#</b> #	Australia Australia

Order ZORAPTERA Family Zorotypidae Zorotypus swezeyi	Swezey's Zoroapteran	н	Hawaii (U.S.A.)
Order ANOPLURA Family Haematopinidae Haematopinus oliveri	Pygmy Hog Sucking Louse	ជ	India
Order HEMIPTERA Family Belastomatidae Belostoma saratogae	Saratoga Springs Bug	Н	U.S.A.
Family Naucoridae Ambrysus amargosus Pelocoris shoshone	Ash Meadows Bug Amargosa Bug	ഥ 🛏	U.S.A. U.S.A.
Family Mesoveliidae Cavaticovelia aaa	Aaa Water Treader Bug	H	U.S.A.
Family Macroveliidae Oravelia pege	Dry Creek Cliff Strider Bug	H	U.S.A.
Family Miridae Cyrtopeltis phyllostegiae Kalania hawaiiensis	Phyllostegian Leaf Bug Lanai Leaf Bug	ы ы	Hawaii (U.S.A.) Hawaii (U.S.A.)
Family Reduviidae Empicoris pulchrus Nesidiolestes ana Nesidiolestes insularis	Pulchrus Thread Bug Ana Wingless Thread Bug Mount Tantalus Wingless Thread Bug Robert's Wingless Thread Bug	нннн	Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)

Selium Wingless Thread Bug Smith's Reduviid Bug	нн	Hawaii (U.S.A.) Hawaii (U.S.A.)
Mauna Loa Seed Bug Kauai Band-legged Seed Bug Mount Haleakala Seed Bug	ннн	
Villosan Flightless Seed Bug French Frigate Shoal Seed Bug Necker Goosefoot Seed Bug Nihoae Seed Bug		Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)
Necker Bunchgrass Seed Bug Bryan's Seed Bug Perkin's Oceanides Seed Bug		
Rough-headed Seed Bug	H	Hawaii (U.S.A.)
Annectans Bug Hawaiian Bug	H H	Hawaii (U.S.A.) Hawaii (U.S.A.)
Kauai Parti-coloured Planthopper Wild Cotton Planthopper Lanai Planthopper Lihue Planthopper Barber's Point Planthopper	ннннн	Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)
Mt Tantalus Shortwing Fern Planthopper Iao Valley Planthopper Bridewell's Planthopper	ннн	Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)

Family Rhopalidae

Oceanides rugosiceps

Oceanides bryani Oceanides perkensi

Nysius sulfusus

Nysius nihoae

Ithmamar hawaiiense

Ithamar annectans

Family Lygaeidae

Metrarga obscura Neseis alternatus Nesocryptias villosa

Neseis haleakalae

Nysius neckerensis

Nysius frigatensis

Nesidiolestes selium

Siacella smithi

Order HOMOPTERA

Family Cixiidae

Oliarus consimilis Oliarus discrepans

Oliarus lanaiensis

Oliarus lihue

Family Delphacidae

Oliarus myoporicola

Nesorestias filicicola

Nesosydne bridwelli

Nesosydne acuta

I Hawaii (U.S.A.)	V U.S.A. V Canada V U.S.A.	I Tasmania	I U.S.A.	I Tasmania	Ex [Hawaii (U.S.A.)] Ex [Hawaii (U.S.A.)]	I Hawaii (U.S.A.), U.S.A.	K South & Central Europe
Nahiku Planthopper Glenwood Planthopper Kusche's Planthopper Diamond Head Planthopper Long-footed Planthopper Keanae Planthopper	Cassini Periodical Cicada Decim Periodical Cicada Decula Periodical Cicada		Red-veined Prairie Leafhopper				
Nesosydne cyrtandrae Nesosydne cyrtandricola Nesosydne kuschei Nesosydne leahi Nesosydne sulcata	Family Cicadidae Magicicada cassini Magicicada septendecim Magicicada septendecula	Family Tettigarctidae Tettigarcta tormentosa	Family Cicadellidae Felexamia rubranura	Family Aphididae Ceriferella leucopogonis	Family Pseudococcidae Clavicoccus erinaceus Phyllococcus oahuensis	Order NEUROPTERA Family Ithonidae Oliarces clara	Family Mantispidae Mantispa styriaca

I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.)	K Europe K Europe	K Europe K Europe K Europe I Hawaii (U.S.A.) K Europe	I U.S.A. E St Helena I		V U.S.A. V Malaysia I U.S.A.	I U.S.A.
Haleakala Spongillalfy Cooke's Spongillalfy Lobe-wing Spongillalfy Swezey's Spongillalfy Usinger's Spongillalfy		Molokai Antlion	Beller's Ground Beetle	Caterpillar Searcher Blue Ground Beetle	Delta Green Ground Beetle Ghost Walker Beetle Schaum's Blue Ridge Ground Beetle	Idaho Dunes Tiger Beetle
Family Hemerobiidae Nesothauma halakalae Pseudopsectra cookeorum Pseudopsectra lobipennis Pseudopsectra swezeyi Pseudopsectra usingeri	Family Ascalaphidae Libelloides libelluloides Libelloides macaronius	Family Myrmeleontidae Acanthaclisis occitanica Dendroleon pantherinus Distoleon tetragrammicus Eidoleon perjurus Myrmeleon formicarius	Order COLEOPTERA Family Carabidae Agonum belleri Aplothorax burchelli	Calosoma sycophanta Carabus intricatus Carabus olymniae	Elaphrus viridis Mormolyce phyllodes Sphaeroderus schaumi shenandoah	Family Cicindelidae Cicindela arenicola

I U.S.A.	1 U.S.A. 1 U.S.A. 1 U.S.A. 1 U.S.A. 1 U.S.A. E Central & West Europe 1 U.S.A. 2 U.S.A. 2 U.S.A.
Cazier's Tiger Beetle Smyth's Tiger Beetle Columbia River Tiger Beetle North-eastern Beach Tiger Beetle Oblivious Tiger Beetle Coral Pink Dunes Tiger Beetle Tiger Beetle Cobblestone Tiger Beetle Los Olmos Tiger Beetle Neojuvenile Tiger Beetle Neojuvenile Tiger Beetle Greenest Tiger Beetle	Hungerford's Crawling Water Beetle Disjunct Crawling Water Beetle Death Valley Agabus Diving Beetle Fig Seed Diving Beetle Flusive Diving Beetle Folkert's Diving Beetle Woolly Diving Beetle Leech's Skyline Diving Beetle Spangler's Diving Beetle Sulphur Springs Diving beetle Utah Diving Beetle
Cicindela cazieri Cicindela chlorocephala smythi Cicindela chlorocephala smythi Cicindela dorsalis dorsalis Cicindela latesignata obliviosa Cicindela limbata albissima Cicindela marginiata Cicindela marginipennis Cicindela nevadica olmosa Cicindela nigrocoerula subtropica Cicindela puritana Cicindela puritana Cicindela tranquebarica viridissima	Family Haliplidae Brychius hungerfordi Haliplus nitens Family Dytiscidae Agabus rumppi Desmopachria conchramis Dytiscus latissimus Graphoderus bilineatus Hydroporus texanus Hydroporus folkertsi Hydroporus pangleri Hydroporus spangleri Hydroporus sulphurius Hydroporus sulphurius Hydroporus sulphurius

I U.S.A. I U.S.A. I U.S.A. I U.S.A.	I U.S.A.	I U.S.A.	I U.S.A.	E Eastern North America	I U.S.A. I U.S.A. I U.S.A. I U.S.A. I U.S.A.
Curved-foot Diving Beetle Narrow-foot Diving Beetle Travertine Band-thigh Diving Beetle Sylvan Diving Beetle	Red Hills Unique Whirligig Beetle	Maureen's Minute Moss Beetle Maureen's Moss Beetle Animas Minute Moss Beetle Texas Minute Moss Beetle Utah Minute Moss Beetle Wing-shoulder Minute Moss Beetle Indiana Minute Moss Beetle Wilbur Springs Minute Moss Beetle	Blind Cave Beetle	American Burying Beetle	Leech's Water Scavenger Beetle Utah Water Scavenger Beetle Arizona Water Scavenger Beetle Ricksecker's Water Scavenger Beetle Seclusive Water Scavenger Beetle

Ochthebius putnamensis

Ochthebius crassalus

Limnebius utahensis

Limnebius texanus

Limnebius aridus

Ochthebius reticulatus

Family Hydraenidae

Gymnocthebius maureenae

Hydraena maureenae

Spanglerogyrus albiventris

Family Gyrinidae

Hygrotus diversipes Hygrotus fontinalis

Hygrotus curvipes

Hygrotus sylvanus

Family Hydrophilidae

Chaetarthria utahensis

Chaetarthria leechi

Hydrochara rickseckeri

Paracymus seclusus

Cymbiodyta arizonica

Nicrophorus americanus

Family Silphidae

Glacicavicola bathysciodes

Family Leiodidae

g Beetle E Hawaii (U.S.A.) V New Zealand V New Zealand	l Scarab Beetle V U.S.A.	V Sardinia (Italy)	I U.S.A.	b Beetle I U.S.A.	-	H	I	<b></b>	I	I U.S.A.	-	>	· 딸	н	H	V Caribbean & N. South America	K Trinidad & Tobago	V Dominica, Guadeloupe	V Martinique, St Lucia	Beetle I U.S.A.	ill Segrah Beetle
Kauai Flightless Stag Beetle	Caracara Commensal Scarab Beetle		Ciervo Scarab Beetle	Cresent Dune Scarab Beetle	Hardy's Scarab Beetle	Large Scarab Beetle	Exiguous Scarab Beetle	Archbold Scarab Beetle	Tibial Scarab Beetle	Ford's Beetle	Tortoise Commensal Scarab Beetle	Big Pine Key Dung Beetle	Woodruff's Dung Beetle	Tortoise Commensal Scarab Beetle	Miami Roundhead Scarab Beetle	Hercules Beetle		Hercules Beetle	Hercules Beetle	Kelso Dune Scarab Beetle	Spiny Florida Sandhill Scarab Beetle
Family Lucanidae Apterocychus honoluluensis Dorcus auriculatus Dorcus ithaginis	Family Trogidae Trox howelli	Family Geotrupidae Typhaeus hiostius	Family Scarabaeidae	Aegialia crescenta	Aegialia haroyi	Aegialia magnifica	Anomala exigua	Anomala eximia	Anomala tibialis	Aphodius fordi	Aphodius troglodytes	Ataenius superficialis	Ataenius woodruffi	Copris gopheri	Cyclocephala miamiensis	Dynastes hercules	Dynastes hercules glaseri	Dynastes hercules hercules	Punastes horniles roidi	Glaresis arenata	Gronocarus multisninosus

Huleechius marroni carolus

Microcylloepus browni

Dubiraphia brunnescens

Dubiraphia giulianii

Dubiraphia parva Dubiraphia robusta Heterelmis stephani

Family Elmidae

Atractelmis wawona

Cylloepus parkeri

seudocotalpa giulianii

Onthophagus polyphemi

Osmoderma eremita

Oryctes chevrolati

Polyphylla anteronivea

Polyphylla avittata

Polyphylla barbata

Polyphylla nubila Prodontria lewisi

Polylamina pubescens

Peltotrupes youngi

Onthophagus furacatus

Mycotrupes pedester

Lichnanthe ursina

Lichnanthe albopilosa

Family Buprestidae

Buprestis splendens

Trigonopelastes floridana

Serica frosti Serica tantula

Optioservus browni	Brown's Riffle Beetle	<b></b> -	U.S.A.
Optioservus canus	Finnacles Kuitle Beetle	<b>→</b> ⊢	U.S.A.
Optioservus phaeus	Scott fulle Decile Devil's Hole Warm Spring Riffle Reetle	h	A S. H
Stanolmis calida monna	Moapa Warm Springs Riffle Beetle	-	U.S.A.
Stenelmis douglasensis	Douglas Riffle Beetle	Н	U.S.A.
Stenelmis gammoni	Gammon's Riffle Beetle	Ι	U.S.A.
Zaitzeva thermae	Warm Spring Riffle Beetle	H	U.S.A.
Family Psephenidae			
Acneus beeri	Beer's False Water Penny Beetle	H	U.S.A.
Acneus burnelli	Burnell's False Water Penny Beetle	H	U.S.A.
Alabamaubria starki	Stark's False Water Penny Beetle	H	U.S.A.
Dicranopselaphus variegatus	Variegated False Water Penny Beetle	Τ	U.S.A.
Psephenus arizonensis	Arizona Water Penny Beetle	Н	U.S.A.
Psephenus montanus	White Mountains Water Penny Beetle	H	U.S.A.
Family Elateridae			
Amychus candezei		>	Chatham Is, New Zealand
Amychus granulatus		>	New Zealand
Eanus hatchi	Hatch's Click Beetle	Π	Canada, U.S.A.
Eopenthes (17 species)	Hawaiian Click Beetles	臼	Hawaii (U.S.A.)
Itodacnus spp.	Necker Click Beetles	<b>-</b>	Hawaii (U.S.A.)
D			
Paleocenus dohmi	Dohrn's Elegant Eucnemid Beetle	П	U.S.A.
Family Lampyridae		1	
Micronaspis floridana	Florida Intertidal Firefly	<b></b>	U.S.A.
Photuris brunnipennis floridana	Everglades Browing Firefly	<b>→</b>	U.S.A.

I Hawaii (U.S.A.)	E Northern & Central Europe	I Mexico, U.S.A. I U.S.A. R Seychelles	I U.S.A. I U.S.A. I Mexico, U.S.A. I U.S.A. I U.S.A. I U.S.A. I U.S.A.	I U.S.A. I U.S.A.	E Hawaii (U.S.A.) E Hawaii (U.S.A.) E Hawaii (U.S.A.) E Central & Northern Europe E U.S.A. V U.S.A. I U.S.A.
Piko Anobiid Beetle	Scharlachkafer	Globose Dune Beetle San Joaquin Dune Beetle Frigate Isl. Giant Tenebrionid Beetle	Hopping's Blister Beetle Mojave Desert Blister Beetle Anthony Blister Beetle Moestan Blister Beetle Molestan Blister Beetle Morrison's Blister Beetle	Antioch Dunes Beetle Sacramento Beetle	Cerambyx Longicorn Mojave Rabbitbrush Longhorn Beetle Valley Elderberry Longhorn Beetle Six-banded Longhorn Beetle
ramily Anobiidae Holcobius pikoensis	Family Cucujidae Cucujus cinnaberinus	Family Tenebrionidae Coelus globosus Coelus gracilis Polposipus herculeanus	Family Meloidae Lytta hoppingi Lytta inseperata Lytta mirifica Lytta moesta Lytta molesta Lytta molesta	Family Anthicidae Anthicus antiochensis Anthicus sacramento	Family Cerambycidae Aeschrithmysus dubautianus Aeschrithmysus swezeyi Aeschrithmysus terryi Cerambyx cerdo Crossidius mojavensis Desmocerus californicus dimorphus Dryobius sexnotatus

Family Anobiidae

K Brazil, Peru  E Central Europe, U.S.S.R. I Hawaii (U.S.A.) E Central & Northern Europe Ex [Chatham Is (New Zealand)]	I U.S.A.  E Hawaii (U.S.A.)	V New Zealand V New Zealand Ex Hawaii (U.S.A.) Ex [Hawaii (U.S.A.)] I U.S.A. V Papua New Guinea V Chatham Is (New Zealand) V New Zealand V New Zealand V New Zealand V New Zealand E Hawaii (U.S.A.) V New Zealand V New Zealand E Hawaii (U.S.A.)
Rude's Longhorn Beetle Rosalia Longicorn	Bog Idol Leaf Beetle Hawaiian Proterhinus Beetles	Flax Weevil Turbott's Weevil Oahu Nesiotes Weevil Antioch Dune Weevil Lichen Weevil
Macrodontia cervicornis Morimus funereus Necydalis rudei Nesithmysus bridwelli Nesithmysus frobesi Nesithmysus haasi Nesithmysus wezeyi Plagithmysus (49 species) Rosalia alpina Xylotoles costatus	Family Chrysomelidae  Donacia idola  Family Aglycyderidae  Proterhinus (72 species)	Family Curculionidae Anagotus fairburni Anagotus turbotti Deinocossonus nesiotes Dryophthorus distinguendus Dryotribus mimeticus Drysticheus rotundicollis Gymnopholus lichenifer Hadramphus spinipennis Hadramphus stilbocarpae Hadramphus filicum Heterais seticostatus Lyperobius huttoni Macrancylus linearis

New Zealand Henderson I. (Pitcairn) U.S.A.	U.S.A. Hawaii (U.S.A.) Hawaii (U.S.A.)			Hawaii (U.S.A.) Hawaii (U.S.A.) Henderson I. (Pitcairn)	Hawaii (U.S.A.) U.S.A. U.S.A. U.S.A. ? U.S.A. ? U.S.A. New Zealand	Tasmania	U.S.A.
> 22 -1		I B > B	I Ex?	古田氏	I I I Ex? V	Н	I
Nelson's Weevil	Rulien's Weevil Gifford's Weevil Kanai Weevil	Munro's Weevil	Lange's El Segundo Dune Weevil Windward Chain Weevils Blackburn's Weevil	Obscure Weevil Hawaiian Snout Beetles	Nihoa Weevil Brown-tassel Weevil Dorothy's El Segundo Dune Weevil Doyen's Dune Weevil Fort Ross Weevil Yorba Linda Weevil		Sugarfoot Moth fly

## Order DIPTERA Family Psychodidae

Family Arteropanorpidae

Apteropanorpa tasmanica

Order MECOPTERA

Trigonoscuta yorbalindae

Unas piceus

Nemapalpus nearcticus

Rhyncogonus (22 species)

Rhyncogonus hendersoni Stenotrupis pritchardiae

Pentarthrum pritchardias

Oedemasylus laysanensis

Onchobarus langei

Oclandius laeviusculus

Nesotocus munroi Nothaldonis peaci

Nesotocus kauaiensis

Nesotocus giffordi

Jodemas (whole genus)

Pentarthrum blackburni

Pentarthrum obscura

l'rigonoscuta brunnotesselata l'rigonoscuta dorothea dorothea

Prigonoscuta doyeni

Trigonoscuta rossi

Microcryptorhynchus orientissimus

Miloderes nelsoni Miloderes rulieni

Megacolabus sculpturatus

Family Mycetophilidae

Arachnocampa tasmaniensis		Ι	Tasmania
Family Blepharoceridae Edwardsina gigantea Edwardsina tasmaniensis	Giant Torrent Midge Tasmanian Torrent Midge	巨口	Australia Tasmania
Family Tabanidae Apatalestea rossi Asaphomyia floridensis Asaphomyia texanus Brennania belkini Merycomyia brunnea Stonemyia volutina	Ross's Apatalestes Tabanid Fly Florida Asaphomyian Tabanid Fly Texas Asaphomyian Tabanid Fly Belkin's Dune Tabanid Fly Brown Merycomyian Tabanid Fly Volutine Stoneyian Tabanid Fly	I I I I I I I X	U.S.A. U.S.A. U.S.A. Mexico, U.S.A. U.S.A. [U.S.A.
Family Acroceridae Eulonchus marialiciae	Mary Alice's Small-headed Fly	I	U.S.A.
Family Asilidae Cophura hurdi Efferia antiochi Metapogon hurdi	Antioch Robberfly Antioch Robberfly Hurd's Robberfly	ннн	U.S.A. U.S.A. U.S.A.
Family Apiocertidae Raphiomydas triochilus	Valley Mydas Fly	Ι	U.S.A.
Family Empididae Chersodromia hawaiiensis	Hawaiian Dance Fly	н	Hawaii (U.S.A.)
Family Dolichopodidae Campsicnemus mirabilis		된 X	[Hawaii (U.S.A.)]

I U.S.A.	I Hawaii (U.S.A.)	Ex [Hawaii (U.S.A.)]	I U.S.A.	I U.S.A.  I U.S.A.
Delong's Flower Fly	Nihoa Two-spotted Asterid Fly		Wilber Springs Shore Fly	Alexander's Caddisfly Castle Lake Caddisfly Obrien Caddisfly Fender's Caddisfly Haddock's Caddisfly Castle Crags Caddisfly Bilobed Caddisfly Spiny Caddisfly One-spot Caddisfly One-spot Caddisfly Artesian Caddisfly Benning's Caddisfly Artesian Caddisfly San Marcos Caddisfly
Family Syrphidae Mixogaster delongi	Family Asteiidae Bryania bipunctata	Family Drosophilidae Drosophila lanaiensis	Family Ephydridae Paracoenia calida	Order TRICHOPTERA Family Rhyacophilidae Rhyacophila alexandra Rhyacophila amabilis Rhyacophila fenderi Rhyacophila haddocki Rhyacophila lineata Rhyacophila lineata Rhyacophila spinata Rhyacophila sunipunctata Rhyacophila sunipunctata Rhyacophila unipunctata Rhyacophila sunipunctata Rhyacophila sunipunctata Phyacophila anipunctata Agapetus artesus Agapetus denningi Agapetus medicus Protoptila arca

Family Hydrotilidae		,	3	
Hydroptila decia	Knoxville Micro Caddisfly	<b>-</b>	U.S.A.	
Neotrichia kitae	Kite's Micro Caddisfly	<b></b> -	U.S.A.	
Ochrotrichia alsea	Alsea Micro Caddisfly	Ι	U.S.A.	
Ochmtrichia contorta	Contorted Micro Caddisfly	Ι	U.S.A.	
Ochrotrichia phenosa	Deschutes Micro Caddisfly	Ι	U.S.A.	
Ochrotrichia proposti	Provost's Micro Caddisfly	Π	U.S.A.	
Ochrotrichia vertreesi	Vertree's Micro Caddisfly	Ι	U.S.A.	
Oxyethira florida	Florida Micro Caddisfly	Н	U.S.A.	
Romily Philonofomidae				
Dolophilodes oregona	Oregon Caddisfly	I	U.S.A.	
Family Stenopsychidae Stenopsychodes lineata		Ι	Tasmania	
:				
Family Polycentropidae Tasmananlegas snilota		I	Tasmania	
المارية				
Family Limnephilidae				
Apatania tavala	Cascades Caddisfly	Н	U.S.A.	
Archaeophylax vernalis		П	Tasmania	
Cryptochia excella	Kings Canyon Caddisfly	H	U.S.A.	
Cryptochia neosa	Blue Mountains Caddisfly	Н	U.S.A.	
Ecclisomyia bilera	King's Creek Caddisfly	П	U.S.A.	
Farula davisi	Green Springs Mountain Caddisfly	H	U.S.A.	
Farula jewetti	Mount Hood Caddisfly	Н	U.S.A.	
Farula reaperi	Tombstone Prairie Caddisfly	<b>-</b>	U.S.A.	
Glyphopsyche missouri	Missouri Caddisfly	H	U.S.A.	
Limnephilus alconura	Kiamath Caddisfly	П	U.S.A.	
Limnephilus atercus	Fort Dick Caddisfly	н	U.S.A.	

I U.S.A. I U.S.A. I U.S.A. Ex [U.S.A.]	I U.S.A. I U.S.A.	I Tasmania I Tasmania	I Tasmania	I U.S.A.	I U.S.A.	I Tasmania	I U.S.A. I U.S.A. I U.S.A. Ex [U.S.A.] I Tasmania
Colombian Gorge Caddisfly Tombstone Prairie Oligophlebodes Clatsop Caddisfly Three-tooth Caddisfly	Fischer's Caddisfly Goeden's Caddisfly			Zigzag Blackwater Caddisfly			Florida Longhorn Caddisfly Vertree's Caddisfly Little Longhorn Caddisfly Athens Caddisfly
Neothramma andersoni Oligophlebodes mostbento Philocasca oron Triaenodes tridonata	Family Lepidostomatidae Lepidostoma fischeri Lepidostoma goedeni	Family Kokiriidae Taskiria mecubbini Taskropsyche lacustris	Family Plectrotarsidae Nanoplectrus truchnasi	Family Sericostomatidae Agarodes ziczac	Family Odontoceridae Psilotreta hansoni	Family Philorheithridae Ramiheithrus kocinus	Family Leptoceridae Ceraclea floridana Ceraclea vertreesi Oecetis parva Triaenodes phalacris Westriplectes pedderensis

V South Africa V Australia	Ex? U.S.A. Ex? U.S.A.	Ex? U.S.A.	I Hawaii (U.S.A.) E Hawaii (U.S.A.)	Ex? U.S.A.	V New Zealand	I Hawaii (U.S.A.)	Ex? U.S.A.	I U.S.A.
Silver Spotted Ghost Moth Bent Wing Swift Moth	American Chestnut Moth Phleophagan Chestnut Moth	Chestnut Clearwing Moth	Necker Leaf-miner Moth			Green Carposinid Moth	Chestnut Ermine Moth	Chestnut Clearwing Moth
Order LEPIDOPTERA Family Hepialidae Leto venus Zelotypia stacyi	Family Nepticulidae Ectodemia castaneae Ectodemia phleophaga	Family Tischeriidae Tischeria perplexa	Family Gracillariidae Petrochroa neckerensis Phildoria wilkesiella	Family Coleophoridae Coleophora leucochrysella	Family Gelechiidae Kiwaia jeanae	Family Carposinidae Heterocrossa viridis	Family Argyresthiidae Argyresthia castaneela	Family Sesiidae Synanthedon castaneae

R U.S.A. I Hawaii (U.S.A.) I Hawaii (U.S.A.) I Hawaii (U.S.A.)	I U.S.A.	I Tasmania V Central & North Europe	K Costa Kica, Panama R Jamaica		Austraua E Canada, U.S.A.	E U.S.A. I Tasmania	V South Africa V South Africa	V South Africa	V Mexico, U.S.A.	V Mexico, U.S.A.	I U.S.A.	I U.S.A.		K Balkans, S. U.S.S.R., Iran V South Africa
San Francisco Tree Lupine Ohe Ohe Leaf-roller Moth Green-Banded Ohe Ohe Leaf-roller Moth Wallupe Leaf-Roller Moth	Busk's Gall Moth	Chequered Skipper	Eight-Spotted Skipper	5	Skipper Dakota Skipper	Pawnee Montane Skipper	Barber's Ranger	Bamboo Sylph	Wandering Skipper	Salt Marsh Skipper	Rare Skipper	Wandering Skipper	Spinose Skipper	Tessellated Skipper Dickson's Sylph
Family Tortricidae Grapholitha edwardsiana Spheterista oheoheana Spheterista pterotropiana Spheterista reynoldsiana	Family Cochylidae Carolella busckana	Family Hesperiidae Antipodia chaostola leucophaea Carterocephalus palaemon	Dalla octomaculata Epargyreus antaeus	Epargyreus spana	Euscheman rafflesia Hesperia dacotae	Hesperia pawnee montana Hesperilla mastersi marakuna	Kedestes barerae bunta	Metisella syrinx	Oreispianus munionga tarana Panoavina errans	Panoquina panoquinoides errans	Problema buienta	Pseudocopaeodes eunus eunus	Syrichtus cribrellum	Syrichtus tessellum Tsitana dicksoni

Family Megathymidae		1	
Stallingsia maculosus	Maculated Manfreda Skipper		U.S.A.
Family Papilionidae			
Archon apollinaris		R	Turkey
Atrophaneura atropos		I	Palawan (Philippines)
Atrophaneura jophon	Sri Lankan Rose	^	Sri Lanka
Atrophaneura luchti		R	Java (Indonesia)
Atrophaneura palu		X	Sulawesi (Indonesia)
Atrophaneura schadenbergi		>	Luzon (Philippines)
Baronia brevicornis	Short-horned Baronia	R	Mexico
Battus zetides	Zetides Swallowtail	^	Hispaniola
Bhutanitis Indlowi	Ludlow's Bhutan Swallowtail	K	Bhutan
Bhutanitis mansfieldi	Mansfield's Three-tailed Swallowtail	R	China
Bhutanitis thaidina	Chinese Three-tailed Swallowtail	R	China
Eurvtides iphitas	Yellow Kite Swallowtail	>	Brazil
Eurytides Ivsithous harrisianus	Harris' Mimic Swallowtail	闰	Brazil
Eurytides marcellinus	Jamaican Kite	>	Jamaica
Graphium alebion chungianus		R	Taiwan
Graphium antiphates cevlonicus	Sri Lankan Five-bar Swordtail	>	Sri Lanka
Graphium aurivilliusi		K	Zaire
Graphium epaminondas	Andamans Swordtail	K	Andaman Is (India)
Graphium idaeoides		짪	Philippines
Graphium lenassori		>	Comoro Is
Graphium meeki	Meek's Graphium	R	Bougainville, Solomon
Graphium megaera		Ι	Palawan (Philippines)
Graphium mendana		R	Bougainville, Solomon
Graphium procles		Η	Sabah (Malaysia)
Graphium sandawanum		Λ	Mindanao (Philippines)
Graphium stresemanni		H	Moluccas (Indonesia)
Luehdorfia chinensis	Chinese Luehdorfia	X	China

I Japan, Taiwan		E Papua New Guinea	I New Guinea	V Moluccas (Indonesia)	V New Guinea	1 New Guinea	T Irian Java (Indonesia)	W Iwin Java (Indonesia)			K Central & West Airica		I Comoro Is	I Hispaniola	V Luzon (Philippines)	I Cuba	V Mindanao (Philippines)	E Luzon (Philippines)			K South America	R Madagascar		E Jamaica		R Sulawesi (Indonesia)	V Burundi, Rwanda, Uganda	R Madagascar	I Mauritius	V Taiwan	K French Guiana	V Bismarck Arch. (Papua New Guinea)	
Japanese Luehdorfia	***	Queen Alexandra's Birdwing	Chimaera Birdwing			Danadica Binduing	Deftertill 2 Disduits	rouseima s du ambana			African Giant Swallowtail	Schaus' Swallowtail		Scarce Haitian Swallowtail		Poey's Black Swallowtail			Taita Blue-banded Papilio					Homerus Swallowtail	Corsican Swallowtail	Jordan's Swallowtail	Cream-banded Swallowtail						
Luehdorfia japonica	Ornithoptera aesacus	Ornithontera alexandrae	Omithontera chimaera	Ornithopies a critimes a	Ornithopiera croesus	Urnithoptera meridionalis	Ornithoptera paradisea	Ornithoptera rothschildi	Ornithoptera tithonus	Papilio acheron	Papilio antimachus	Papilio aristodemus ponceanus	Panilio aristophontes	Panilio aristor	Panilio henguetanus	Danilio caignanahus	Danilio carolinensis	Danillo chibae	Papilio desmondi teita	Papilio esperanza	Danilio aarlenni	Dentity among with:	Papino grossmini Danilio himoros	Denillo homenis	Danilio hosniton	Dentity tondom:	Danilio Joneotronia	Danilio mangolita	Fapitio mangouia	Papitto mantius	Fapitio Ital and	Papilio moemeri	

V Madagascar V Lesser Sunda Is (Indonesia)	V Philippines	V Reunion	Ex [Seychelles]		R Bismarck Arch. (Papua New Guinea)	V Brazil	V Brazil	K French Guiana	R Brazil	K Venezuela	K Brazil, Peru	K Bolivia	•	E F.R.G.	R Afghanistan, Tadzhikistan		Ex [U.S.A.]	K China, Vietnam	R India to China	E Taiwan	I Sabah, Sarawak (Malaysia)	V Sulawesi (Indonesia)	I Moluccas (Indonesia)	I Canada, U.S.A.	E South Africa	I U.S.A.	R Zimbabwe	
Madagascan Emperor Swallowtail		Papillon La Pature		Kilimanjaro Swallowtail		Fluminense Swallowtail			Hahnel's Amazonian Swallowtail				Apollo			Shepard's Clodius Parnassian	Strobbeen's Clodius Parnassian	Golden Kaiser-I-Hind	Kaiser-I-Hind			Talaud Black Birdwing		West Virginia White		Andrew's Marble Butterfly		

arides steinbachi
arnassius apollo

Parides pizarro

arides klagesi

Parides burchellanus

Parides hahneli

Parides coelus

Parides ascanius

Papilio weymeri

Papilio toboroi

Papilio phorbanta nana

Papilio sjoestedti

Papilio phorbanta

Papilio osmana

Papilio morondavana

Papilio neumoegeni

Parnassius apollo vinningensis

Parnassius autocrator

Parnassius clodius shepardii Parnassius clodius strohbeeni

Teinopalpus imperialis

Teinopalpus aureus

Troides aeacus kaguya

Troides andromache

Troides prattorum

Troides dohertyi

Euchloe hyantis andrewsi

Mylothris carcassoni

Family Pieridae

Artogeia virginiensis

Belenois orgygia

)ta	
i dei	
krueper	
Pieris !	

India

Family Lycaenidae			
Alaena margaritacea		Λ	South Africa
Aloeides caledoni		Λ	South Africa
Aloeides dentatis		23	South Africa
Aloeides egerides		Λ	South Africa
Aloeides lutescens		Λ	South Africa
Argyrocupha malagrida malagrida	Lion's Head Copper	Λ	South Africa
Argyrocupha malagrida paarlensis	Lion's Head Copper	Λ	South Africa
Callophrys mossii bayensis	San Bruno Elfin	臼	U.S.A.
Capys penningtoni		闰	South Africa
Chrysoritis cotrelli		н	South Africa
Chrysoritis oreas	Drakensburg Copper	Н	South Africa
Chrysoritis zeuxo		<b>-</b>	South Africa
Cyclyrius mandersi		Н	Mauritius
Deloneura immaculata		Ex?	South Africa
Deloneura millari millari	Millar's Buff	Λ	South Africa
Deudorix penningtoni		^	South Africa
Deudorix vansoni		Λ	South Africa
Durbania limbata		Λ	South Africa
Erikssonia acraeina		<b>X</b>	South Africa
Eumaeus atala florida	Florida Atala Hairstreak	Λ	U.S.A.
Everes comyntas texanus	Texas Tailed Blue	Ex	[U.S.A.]
Glaucopsyche lygdamus palosverdesensis	Palos Verdes Blue	Ex?	U.S.A.
Glaucopsyche xerces	Xerces Blue	Ex	[U.S.A.]
Hemiargus thomasi bethune-bakeri	Miami Blue Butterfly	Н	U.S.A.
Icaricia icarioides missionensis	Mission Blue	ជ	U.S.A.
Icaricia icarioides moroensis	Moro Bay Blue	н	U.S.A.
Icaricia icarioides pheres	Pheres Blue	-	U.S.A.
Lepidochrysops ariadne		臼	South Africa
Lepidochrysops bacchus	Wineland Blue	Λ	South Africa

South Africa

Ornipholidotos peucetia penningtoni Lepidochrysops methymna dicksoni Maculinea arionides matsumara Plebejus icarioides missionensis Maculinea teleius burdigalensis Philotiella speciosa bohartorum Lycaeides argyrognomon lotis Lepidochrysops loewensteini Lycaeides melissa samuelis Lepidochrysops hypopolia Panchala ganesa loomisi Lycaena dorcas claytoni Notarthrinus binghami Lepidochrysops lotana Maculinea nausithous Poecilmitis lyncurium Poecilmitis endymion Poecilmitis nigricans Maculinea arionides Plebejus emigdionis Lepidochrysops titei Oxychaeta dicksoni Poecilmitis aureus Poecilmitis adonis Maculinea teleius Oreolyce dohertyi Plebicula golgus Maculinea rebeli Maculinea alcon Maculinea arion Lycaena hermes Lycaena dispar

Lotis Blue
Karner Blue
Large Copper
Clayton's Copper
Hermes Copper
Alcon Large Blue
Large Blue
Greater Large Blue
Greater Large Blue
Busky Large Blue
Rebel's Large Blue
Rebel's Large Blue

Naga Hedge Blue White Mimic Dickson's Copper Tailless Blue Bohart's Blue San Emigdio Blue Mission Blue Tsomo River Copper Blue Jewel Copper

Mozambique, South Africa South & Central Europe Surope & Northern Asia China, Japan, U.S.S.R. China, Japan, U.S.S.R. Europe, U.S.S.R. Northern Europe Surope, U.S.S.R. Europe, U.S.S.R. Mexico, U.S.A. South Africa rance U.S.A. U.S.A. U.S.A. U.S.A. U.S.A. U.S.A. Spain Japan ndia India

Pseudalmenus chlorinda chlorinda Shijimiaeoides langstoni langstoni Shijimiaeoides battoides comstocki Pseudalmenus chlorinda conara Shijimiaeoides battoides allyni Shijimiaeoides enoptes smithi Shijimiaeoides rita mattonii Thestor dicksoni dicksoni Strymon acis bartrami Pseudiolaus Iulua Spindasis collinsi Strymon avalona Poecilmitis rileyi Thestor kaplani

Family Libytheidae

Libythea cinyras

Jranothauma usambarae

'rimenia wallengrenii

hestor tempe

Family Danaidae

Amauris comorana Amauris nossima Amauris phoedon Anetia briarea Anetia cubana

Anetia pantheratus Euploea blossomae Euploea albicosta Danaus cleophile Anetia jaegeri

White Spotted Sapphire El Segundo Blue Comstock's Blue Langston's Blue Mattoni's Blue Smith's Blue

Bartram's Hairstreak Avalon Hairstreak Dickson's Thestor Kaplan's Thestor Wallengren's Copper

South Africa Tasmania Tasmania

U.S.A. U.S.A.

South Africa

Tanzania U.S.A. U.S.A. U.S.A.

U.S.A. U.S.A.

South Africa

South Africa

South Africa

South Africa **Panzania** 

[Mauritius] Ä

Comoro Is, Madagascar Comoro Is

Cuba, Hispaniola Mauritius

Hispaniola Cuba

Cuba, Hispaniola

(rian Jaya (Indonesia) Hispaniola, Jamaica Philippines Bismarck Arch. (Papua New Guinea) Bismarck Arch. (Papua New Guinea)

Sulawesi (Indonesia)

Indonesia

Sulawesi (Indonesia)

ndonesia

Bismarck Arch. (Papua new Guinea)

Sulawesi (Indonesia) Sulawesi (Indonesia) (rian Jaya (Indonesia)

Philippines

Sri Lanka

India

Philippines

Seychelles

Sumatra (Indonesia)

Mauritius, Reunion, Rodrigues

Java (Indonesia)

Sulawesi (Indonesia)

Parantica kuekenthali Parantica garamantis Euploea configurata Euploea latifasciata Euploea tripunctata Euploea dentiplaga Ideopsis hewitsonii Parantica dannatti Idea tambusisiana Ideopsis oberthurii Parantica crowleyi Parantica marcia Euploea cordelia Ideopsis klassika Parantica clinias Euploea martinii Parantica davidi Parantica albata Euploea gamelia Parantica kirbyi Euploea caespes Idea malabarica Euploea eupator Euploea euphon Euploea doretta Euploea eboraci Euploea magou Euploea tobleri Euploea lacon Euploea mitra Idea iasonia Idea electra

Sulawesi Tree Nymph

Bismarck Arch. (Papua New Guinea)

Bougainville, Solomon Is

Philippines

Philippines

Borneo

Irian Jaya (Indonesia)

Sulawesi (Indonesia)

New Guinea

Java, Sumatra (Indonesia)

Sulawesi (Indonesia) Irian Jaya (Indonesia)

Indonesia

ndonesia

- 170 -

Parantica menadensis		R	Sulawesi (Indonesia)
Parantica milagros		23	Philippines
Parantica nilgiriensis		ĸ	India
Parantica philo		24	Indonesia
Parantica phyle		<b>X</b>	Philippines
Parantica pseudomelaneus		R	Java (Indonesia)
Parantica pumila		R	New Caledonia
Parantica rotundata		<b>x</b>	Bismarck Arch. (Papua New Gui
Parantica schoenigi		R	Philippines
Parantica sulewattan		H	Sulawesi (Indonesia)
Parantica taprobana		ĸ	Sri Lanka
Parantica tityoides		R	Sumatra (Indonesia)
Parantica toxopei		H.	Sulawesi (Indonesia)
Parantica wegneri		æ	Indonesia
Parantica weiskei		<b>8</b>	New Guinea
Protoploea apatela		24	New Guinea
Tiradelphe schneideri		R	Solomon Is.
Tirumala euploeomorpha		R	Solomon Is.
Tirumala gautama		R	Indochina, China, Malaysia
Family Satyridae			
Coenonympha oedippus	False Ringlet	田	Europe & Northern Asia
Erebia annada annada		R	Bhutan, India
Erebia christi	Raetzer's Ringlet	Λ	Italy, Switzerland
Erebia gorgone	Gavarnie Ringlet	П	Pyrenees
Erebia narasingha narasingha		R	India
Erebia ottomana	Ottoman Brassy Ringlet	æ	Southern Europe
Erebia scipio	Larche Ringlet	<b>E</b>	France, Italy
Erebia sthennyo	False Dewy Ringlet	ద	France, Spain
Erebia sudetica	Sudeten Ringlet	>	Europe
Lethe distans	Scarce Red Forester	ĸ	Burma, India
Lethe dura gammiei		ĸ	Bhutan, India

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Madagascar, Mauritius, Reunion Shutan, Burma, India Nicobar (India) Shutan, India Bhutan, India Surma, India 3urma, India South Africa South Africa South Africa South Africa South Africa South Africa Madagascar Madagascar Madagascar Mauritius **Panzania Fanzania Panzania Panzania** U.S.A. Kenya Kenya U.S.A. U.S.A. India ndia India Uncompahgre Fritillary Butterfly Western Forest Emperor Silver Barred Charaxes Sthenele Wood Nymph Lange's Metalmark Dickson's Brown Florida Leafwing Chestnut Rajah Battling Glider Antanartia borbonica mauritiana Charaxes druceanus williamsi Charaxes druceanus entabeni Cymothoe alcimeda alcimeda Charaxes xiphares desmondi Ypthima dohertyi persimilis Pararge menava maeroides Charaxes xiphares xiphares Family Nymphalidae Charaxes durnfordi nicholi Charaxes karkloof capensis Cercyonis sthenele sthenele Apodemia mormo langei Stygionympha dicksoni Antanartia borbonica Cymothoe amaniensis Lethe europa tamuna Lethe ocellata lyncus Apaturopsis pauliani Charaxes usambarae Symothoe magambae Lethe gemina gafuri Apaturopsis kilusa Cymothoe aurivillii Boloria acrocnema Charaxes marieps Lethe margaritae Charaxes cowani Lethe ramadeva Anaea floridalis Lethe satyavati

R Malawi V Kenya R Andaman Is (India) E U.S.A. I U.S.A. I East & South Africa Ex [Taiwan] R Madagascar	V France, Italy V Ecuador, Peru E Brazil I Tasmania E Northern Europe V Tanzania	I Comoro Is, Madagascar, Mauritius R Madagascar R Madagascar R Sikkim (India) R Andaman Is (India) I Madagascar E Seychelles	I Madagascar, Mauritius I Madagascar, Reunion Ex [Mauritius] I Japan, Taiwan I U.S.A. R Madagascar Ex [U.S.A.] I U.S.A.
Andaman Leafwing Bay Checkerspot Butterfly Mono Checkerspot Butterfly Mottled Green	Corsican Fritillary Natterer's Longwing Scarce Fritillary	Pale Hockeysticker Sailer	Tawny Crescent Butterily Salamis Retrecie Salamis Retrecie Smokey Eyed Brown Butterfly Atossa Callippe Silverspot Silverspot
Cymothoe melanjae Cymothoe teita Doleschallia bisaltide andamana Euphydryas editha bayensis Euphydryas editha monoensis Euryphura achlys Euthalia malapana	Fabriciana elisa Heliconius charltonius peruvianus Heliconius nattereri Heteronympha cordacea comptena Hypodryas maturna	Hypolimnas antebora Hypolimnas dubius drucei Neptis decaryi Neptis manasa Neptis metella gratilla Neptis sankara nar Neptis saxtilla	Phyciodes batesi Salamis angustina Salamis angustina Salamis angustina uinsoni Sasakia charonda Satyrodes eurydice fumosa Smerina manoro Speyeria adiaste atossa Speyeria callippe callippe Speyeria hydaspe conquista

I Canada, U.S.A.	I Mexico, U.S.A.	I U.S.A.		V U.S.A.	R U.S.A.		R Madagascar	R Madagascar			V New Zealand	I Hawaii (U.S.A.)	I Hawaii (U.S.A.)	I Hawaii (U.S.A.)		I Tasmania	I Tasmania	I Tasmania	I Tasmania	I Tasmania	I Hawaii (U.S.A.)	K Austria, F.R.G.		Ex? Hawaii (U.S.A.)	Ex? Hawaii (U.S.A.)	Ex? Hawaii (U.S.A.)	
Regal Fritillary	Blue Silverspot	Great Basin Silverspot	Behren's Silverspot	Oregon Silverspot	Myrtle's Fritillary					Hedyleptan Moths		Blue Margaronian	Green Margaronian	Ohenaupaka Oeobian Moth							Ioxantha Looper Moth		Kona Giant Looper Moth	Ko'olau Giant Looper Moth	Hawaiian Hopseed Looper Moth	Ola'a Peppered Looper Moth	
Speveria idalia	Speveria nokomis caerulescens	Speveria nokomis nokomis	Speyeria zerene behrensii	Speveria zerene hippolyta	Speyeria zerene myrtleae	Family Acraeidae	Acraea hova	Acraea sambavae	Family Pyralidae	Hedylepta (14 species)	Kupea electilis	Margaronia cyanomichla	Margaronia exaula	Oeoblia dryadopa	Family Geometridae	Acolymbes upilorites	Dire aesiodora	Dirce lunaris	Dirce oriplancta	Diree solaris	Fletcherana ioxantha	Gnophos obscurata	Scotorythra megalophylla	Scotorythra nesiotes	Scotorythra paratactis	Tritocleis microphylla	

Small Lappet Moth	ΣI	Central & Southern Europe Central & North Europe to Japan
Spanish Moon Moth Great Peacock Moth	∧ ⊠	France, Spain Austria, Czechoslovakia, F.R.G.
Kern Primrose Sphinx Moth Prairie Sphinx Moth	E X Moth V E	Hawaii (U.S.A.) U.S.A. U.S.A. Ramone & 11 S.S.R.
Blackburn's Sphinx Moth none known Fabulous Green Sphinx of Kauai		Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)
Poko Noctuid Moth Midway Noctuid Moth Kerr's Noctuid Moth Laysan Noctuid Moth		Hawaii (U.S.A.) [Hawaii (U.S.A.)] Hawaii (U.S.A.) [Hawaii (U.S.A.)]
Procellaris grotis Noctuid Moth Marbled Underwing Moth Precious Underwing Moth Hebard's Noctuid Moth Confused Moth Minute Noctuid Moth	Moth	[Hawaii (U.S.A.)] [Hawaii (U.S.A.)] U.S.A. U.S.A. Hawaii (U.S.A.)
Laysan Dropseed Noctuid Moth	E stuid Moth Ex	Austria, F.R.G. [Hawaii (U.S.A.)]

Proserpinus proserpina Tinostoma smaragditis

Manduca blackburni

Family Noctuidae

Agrotis crinigera

Agrotis fasciata

Agrotis kerri

Catocala marmorata

Agrotis procellaris

Agrotis laysanensis Agrotis photophila Helicoverpa confusa Helicoverpa minuta

Hydraecia petasitis Hypena laysanensis

Erythroecia hebardi

Catocala pretiosa

Family Lasiocampidae

Family Saturniidae

Graellsia isabelae

Saturnia pyri

Phyllodesma ilicifolia

Eriogaster catax

Family Sphingidae

Celerio wilsoni perkinsi

Euproserpinus euterpe

Euproserpinus wiesti

Hyles hippophaes

Hypena neweili Hypena plagiota Hypena senicula Lithophane lemmeri Peridroma porphyrea	Hilo Noctuid Moth Lovegrass Noctuid Moth Kaholuamano Noctuid Moth Lemmer's Noctuid Moth Ceromatic Noctuid Moth	<ul> <li>Ex? Hawaii (U.S.A.)</li> <li>Ex? Hawaii (U.S.A.)</li> <li>Ex? Hawaii (U.S.A.)</li> <li>I U.S.A.</li> <li>Ex [Hawaii (U.S.A.)]</li> <li>I Canada, U.S.A.</li> </ul>
Order HYMENOPTERA Family Eupelmidae Eupelmus nihoaensis	Nihoa Eupelmus Wasp	I Hawaii (U.S.A.)
Family Bethylidae Sclerodermus nihoaensis	Nihoa Sclerodermus Wasp	I Hawaii (U.S.A.)
Family Mutillidae Myrmosula pacifica	Antioch Mutillid Wasp	I U.S.A.
Family Formicidae Anergates atratulus Aneuretus simoni Aulacopone relicta Camponotus aethiops Camponotus dalmaticus Camponotus fallax	Sri Lankan Relict Ant Caucasian Relict Ant	I F.R.G., Switzerland, U.K. Sri Lanka K Azerbaijan (U.S.S.R.) I F.R.G. I Switzerland I F.R.G.
Camponotus universitatis		I F.R.G., France I Europe
Epintyrnu groesswaa Epimyrma ravouxi Formica aquilonia Rormica Ingribris	Ravoux's Slavemaker Ant	R Central & Southern Europe V F.R.G.
Formica tugados Formica polyctena Formica rufa Formica transkaucasica	European Red Wood Ant Red Wood Ant Black Bog Ant	V F.R.G., Italy V Central Europe I Northern Europe

Formica uralensis Leptothorax goesswaldi Myrmica bibikoffi	Goesswald's Inquiline Ant	ΙЖΙ	F.R.G., Switzerland Switzerland Switzerland
Myrmica slovaca Nothomyrmecia macrops Polyergus rufescens	Australian Ant	ц Ы ц	Switzerland Australia F.R.G.
Family Vespidae Odynerus niihauensis Odynerus soror	Niihau Vespid Wasp Soror Vespid Wasp	घ घ	Hawaii (U.S.A.) Hawaii (U.S.A.)
Family Sphecidae  Deinomimesa hawaiiensis  Deinomimesa punae Ectemnius curtipes Ectemnius fulvicrus Ectemnius giffardi Ectemnius haleakalae Ectemnius nesocrabo bidecoratus Eucerceris ruficeps Nesomimesa kauaiensis Nesomimesa perkins Nesomimesa sciopteryx Philanthus nasalis  Family Colletidae Nesoprosopis (57 species)	Hawaiian Sphecid Wasp Puna Sphecid Wasp Short-foot Sphecid Wasp Brown Cross Sphecid Wasp Giffard's Sphecid Wasp Haleakala Sphecid Wasp Bidecoratus Sphecid Wasp Redheaded Sphecid Wasp Kauai Sphecid Wasp Antioch Sphecid Wasp	ывыыын навын н	Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) U.S.A. Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.) Hawaii (U.S.A.)
Family Andrenidae Perdita hirticeps luteocincta Perdita scitula antiochensis	Yellow Banded Andrenid Bee Antioch Andrenid Bee	пп	U.S.A. U.S.A.

K Moluccas (Indonesia)		V Equatorial Tropics	V Southern Hemisphere I Tasmania I Tasmania		K North-east Atlantic CT North-east Atlantic, Mediterranean
Wallace's Giant Bee	Phylum ONYCHOPHORA	Peripatus (10 genera)	Peripatus (12 genera)	Phylum ECHINODERMATA	European Edible Sea Urchin Purple Urchin
Family Megachilidae Chalicodoma pluto	Class ONYCHOPHORA	Order ONYCHOPHORA Family Peripatidae	Family Peripatosidae  Dendy (3 species)  Euperipatoides sp. "leuckarti"  Ooperipatellus insignis	Class ECHINOIDA	Order ECHINOIDA Family Echinidae Echinus esculentus Paracentrotus lividus

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The Red Data Book concept, originated by Sir Peter Scott in the mid-1960s, aims to focus attention on the plight of the earth's vanishing wildlife. The concept has been outstandingly successful and, over two decades later, many national, regional, and global Red Data Books have been published, with many more countries in the process of compiling their own lists of threatened species. The information provided in national and regional compilations will inevitably be more detailed than the global overviews produced by IUCN. There is, however, an increasing demand for an international list that categorises the status of globally threatened taxa, and it is to meet this demand that the *IUCN Red List of Threatened Animals* has been produced. This edition is an update of the 1988 Red List, and new editions will be published on a regular basis.

Produced from the databases of the World Conservation Monitoring Centre, the Red List presents, for each threatened species, the scientific name, the English vernacular name, the IUCN threatened category, and a brief description of the animal's range. This is followed by an index to the list based on the order, family, and generic names, with vernacular names for major groupings. Also included is an essay on the role of captive breeding in the conservation of species, prepared by Dr Nathan Flesness and Dr Tom Foose of the IUCN/SSC Captive Breeding Specialist Group. A guest essay is a regular feature of the IUCN Red Lists.

Whilst the length of the Red List makes depressing reading, the information it contains should be of fundamental value to conservationists.

Prepared with financial support from the World Conservation Monitoring Centre and published with a grant from the IUCN Species Survival Commission.

A contribution to GEMS-the Global Environment Monitoring System.





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